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ABSTRACT

This report presents data on Internet access in U.S. public schools from 1994 to 2002 by school characteristics. It provides trend analysis on the progress of public schools and classrooms in connecting to the Internet and on the ratio of students to instructional computers with Internet access. For the year 2002, this report also presents data on the types of Internet connections used; student access to the Internet outside of regular school hours; laptop computer loans; hand-held computers for students and teachers; and school Web sites. It also contains information on computer hardware, software, and Internet support and Web site support at the school; teacher professional development on how to integrate the use of the Internet into the curriculum; and technologies and procedures to prevent student access to inappropriate material on the Internet. Appended are the Methodology and Technical Notes; and Questionnaire. (Contains 43 tables and 4 figures.) (Author)

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National Center for Education Statistics

FRSS
Fast Response Survey System

Internet Access in U.S. Public Schools and Classrooms: 1994–2002

E.D. Tabs

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Internet Access in U.S. Public Schools and Classrooms: 1994–2002

E.D. Tabs

U.S. Department of Education
Institute of Education Sciences
NCES 2004-011

October 2003

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Introduction

Since 1994, the National Center for Education Statistics (NCES) has surveyed public schools to estimate access to information technology in schools and classrooms. In the fall of each academic year, a new nationally representative sample of public schools is surveyed about Internet access and other Internet-related topics. The results of this survey show what progress has been made since these data were first collected in 1994, and help assess the magnitude of tasks remaining to make the Internet available as an educational tool in all schools.

Although some items, such as those on school and classroom connectivity, have appeared annually on the survey, new items have been added as technology has changed and new issues have arisen. For example, an item on types of Internet connections was added in 1996 and has remained part of the subsequent surveys, with some modifications. The fall 2002 survey included items on access to the Internet outside of regular school hours; technologies and procedures used to prevent student access to inappropriate material on the Internet; school web sites; staff responsible for computer hardware, software, Internet, and web site support; loans of laptop computers to students; and provision of hand-held computers to students and teachers.

This survey was conducted by NCES using the Fast Response Survey System (FRSS). FRSS is designed to administer short, focused, issue-oriented surveys that place minimal burden on respondents and have a quick turnaround from data collection to reporting. Questionnaires for this survey were mailed to a representative sample of 1,206 public schools in the 50 states and the District of Columbia. Data have been weighted to yield national estimates. Detailed information about the survey methodology is provided in appendix A, and the questionnaire can be found in appendix B.

In addition to national estimates, selected survey findings are presented by the following school characteristics:

- instructional level (elementary, secondary);
- school size (enrollment of less than 300, 300 to 999, 1,000 or more);
- locale (city, urban fringe, town, rural);
- percent minority enrollment (less than 6 percent, 6 to 20 percent, 21 to 49 percent, 50 percent or more); and

- percent of students eligible for free or reduced-price lunch (less than 35 percent, 35 to 49 percent, 50 to 74 percent, 75 percent or more), which is used as a measure of poverty concentration at the school.

It is important to note that many of the school characteristics used for independent analysis may also be related to each other. For example, enrollment size and instructional level of schools are related, with secondary schools typically being larger than elementary schools. Similarly, poverty concentration and minority enrollment are related, with schools with a higher minority enrollment also more likely to have a high concentration of poverty. Other relationships between analysis variables may exist. Because of the relatively small sample size used in this study, it is difficult to separate the independent associations these variables have with the data of interest. Their existence, however, should be considered in the interpretation of the data.

All specific statements of comparison made in this report have been tested for statistical significance through trend analysis tests and *t*-tests adjusted for multiple comparisons using the Bonferroni adjustment,[1] and are significant at the 95 percent confidence level or better. However, only selected findings are presented for each topic in the report. Throughout this report, differences that may appear large (particularly those by school characteristics) may not be statistically significant. This is due in part to the relatively large standard errors surrounding the estimates (because of the small sample size), and the use of the Bonferroni adjustment to control for multiple comparisons. A detailed description of the statistical tests supporting the survey findings can be found in appendix A.

[1]The Bonferroni adjustment was also used for previous FRSS Internet reports. The Bonferroni adjustment is appropriate to test for statistical significance when the analyses are mainly exploratory (as in this report) because it results in a more conservative critical value for judging statistical significance (see the methodology section, appendix A, for a more detailed discussion of the Bonferroni adjustment).

Selected Findings

This report presents key findings from the survey "Internet Access in U.S. Public Schools, Fall 2002." For selected topics, data from previous FRSS Internet surveys are presented as well. The findings are organized as follows:

- school connectivity;
- students and computer access;
- school web sites;
- technologies and procedures to prevent student access to inappropriate material on the Internet; and
- teacher professional development on how to integrate the use of the Internet into the curriculum.

School Connectivity

The survey asked whether the schools had access to the Internet. Other data collected allowed for the computation of the proportion of instructional rooms with Internet access. In addition, schools were asked to indicate the type of Internet connections used, as well as the staff position of the person primarily responsible for computer hardware, software, and Internet support at the school.

School Access

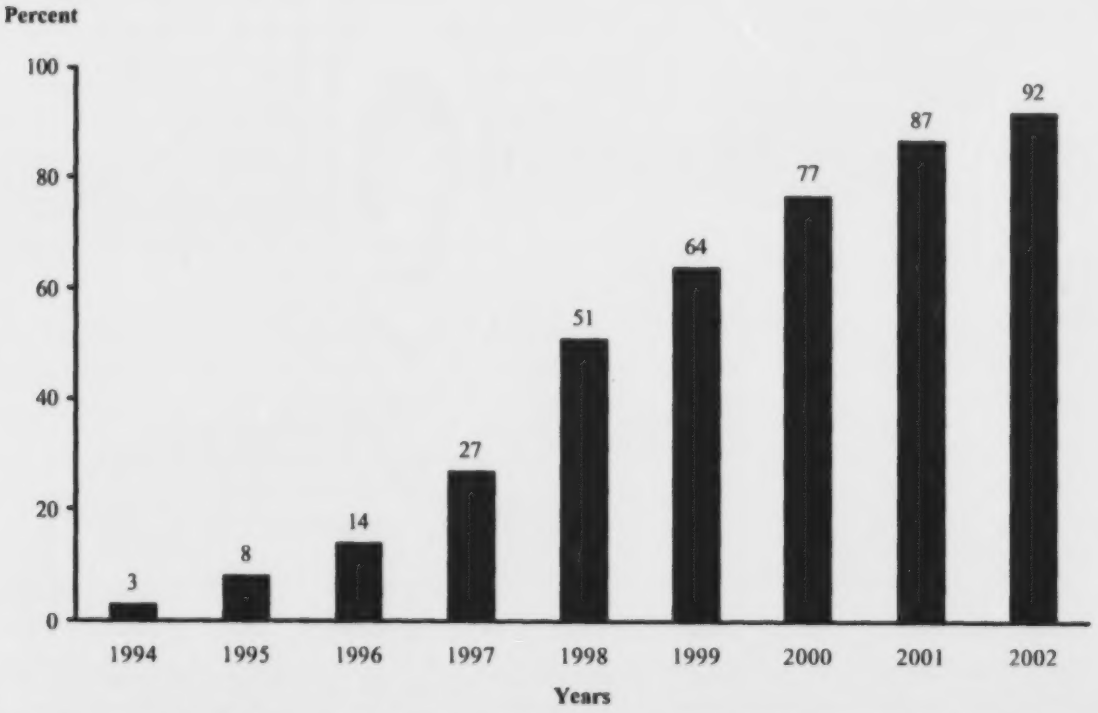
- In fall 2002, 99 percent of public schools in the United States had access to the Internet. When NCES first started estimating Internet access in schools in 1994, 35 percent of public schools had access (table 1). In 2002, no differences in school Internet access were observed by any school characteristics. This is consistent with data reported previously (Kleiner and Farris 2002), which showed that there have been virtually no differences in school access to the Internet by school characteristics since 1999.

Instructional Room Access

- Public schools have made consistent progress in expanding Internet access in instructional rooms,[2] from 3 percent in 1994 to 77 percent in 2000 and 92 percent in 2002 (figure 1 and table 2).

- In 2002, there were differences in Internet access in instructional rooms by locale (table 2). A smaller percentage of instructional rooms were connected to the Internet in city schools (88 percent) than in schools located in towns (96 percent) and rural areas (93 percent).

Figure 1. Percent of public school instructional rooms with Internet access: 1994–2002



NOTE: Percentages are based on all schools. All of the estimates in this report were recalculated from raw data files using the same computational algorithms. Consequently, some estimates presented here may differ trivially (i.e., 1 percent) from results published prior to 2001.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Survey on Advanced Telecommunications in U.S. Public Schools, K–12," FRSS 51, 1994; "Survey on Advanced Telecommunications in U.S. Public Schools, K–12," FRSS 57, 1995; "Advanced Telecommunications in U.S. Public Schools, Fall 1996," FRSS 61, 1996; "Internet Access in U.S. Public Schools, Fall 1997," FRSS 64, 1997; "Internet Access in U.S. Public Schools, Fall 1998," FRSS 69, 1998; "Internet Access in U.S. Public Schools, Fall 1999," FRSS 75, 1999; "Internet Access in U.S. Public Schools, Fall 2000," FRSS 79, 2000; "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; and "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

[2]Instructional rooms include classrooms, computer and other labs, library/media centers, and any other rooms used for instructional purposes.

Types of Connections

Over the years, changes have occurred in the types of Internet connections used by public schools and the speed at which they are connected to the Internet. In 1996, dial-up Internet connections (a type of narrowband connection) were used by about three-fourths (74 percent) of public schools having Internet access (Heaviside, Riggins, and Farris 1997). In comparison, in 2001, 5 percent of schools used dial-up connections, while the majority of public schools (55 percent) reported using T1/DS1 lines (a type of broadband connection), a continuous and much faster type of Internet connection than dial-up connections (Kleiner and Farris 2002).

- In 2002, 94 percent of public schools with Internet access used broadband connections to access the Internet (table 3). This is an increase from 2001 and 2000, when 85 percent and 80 percent of the schools, respectively, were using broadband connections.[3] In 2002, as in previous years (Kleiner and Farris 2002), the likelihood of using broadband connections increased with school size; 90 percent of small schools reported using broadband connections to access the Internet, compared with 100 percent of large schools.

- The use of broadband connections increased between 2000 and 2002 from 81 percent to 95 percent in schools with the highest minority enrollment (table 3). Similarly, the percentage of schools with the highest poverty concentration (as measured by the percent of students eligible for free or reduced-price lunch) using broadband connections to access the Internet increased from 75 percent to 95 percent.

- Twenty-three percent of public schools with Internet access used wireless Internet connections in 2002 (table 4).[4] Large schools were more likely than medium-sized and small schools to use wireless Internet connections (37 percent compared with 23 percent and 17 percent, respectively).

- Of the schools using wireless Internet connections, 88 percent indicated that they used broadband wireless Internet connections (table 4). Across all school characteristics, this percentage ranged from 76 percent to 100 percent.

- In 2002, 15 percent of all public school instructional rooms had wireless Internet connections (table 5). Differences were observed only by instructional level. A higher percentage of instructional rooms had wireless Internet connections in secondary schools (19 percent) than in elementary schools (13 percent).

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[3] In 2000 and 2001, respondents were instructed to circle as many types of connections as there were in the school. The 2002 questionnaire directly asked whether the schools used broadband and narrowband connections. These percentages include schools using only broadband connections, as well as schools using both broadband and narrowband connections. They do not include schools using narrowband connections exclusively. Broadband connections include T3/DS3, fractional T3, T1/DS1, fractional T1, and cable modem connections. In 2001 and 2002, they also included DSL connections, which had not been an option on the 2000 questionnaire.

[4] A school could use both wireless and wired Internet connections. Wireless Internet connections can be broadband or narrowband.

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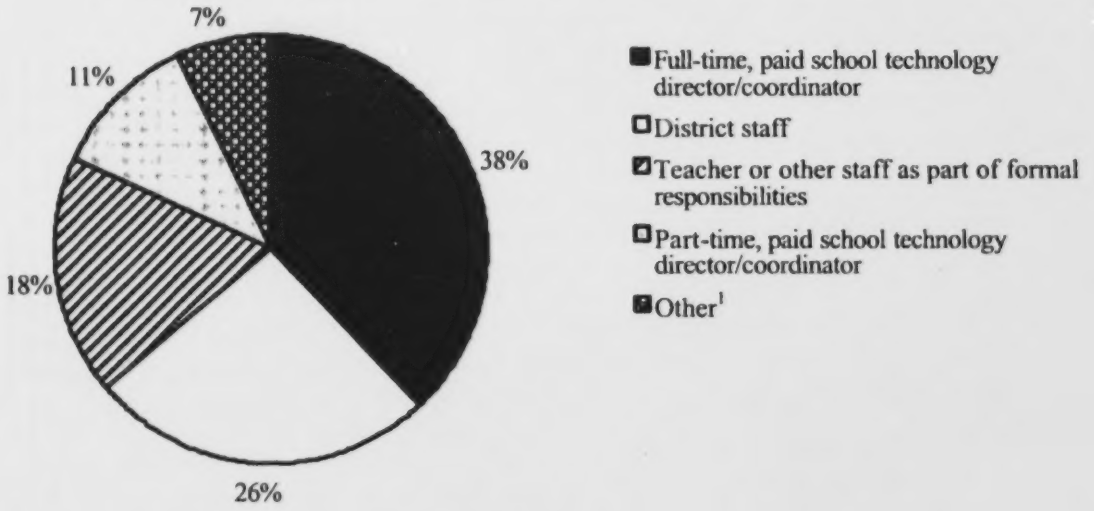
Computer Hardware, Software, and Internet Support

- The staff position of the person with primary responsibility for computer hardware, software, and Internet support varied considerably across schools. Thirty-eight percent of schools indicated that it was a full-time, paid school technology director or coordinator; 26 percent, district staff; 18 percent, a teacher or other staff as part of formal responsibilities; 11 percent, a part-time, paid school technology director or coordinator; 3 percent, a consultant or outside contractor; 3 percent, a teacher or other staff as volunteers; and 1 percent, some other position (table 6 and figure 2).

- The likelihood that the person primarily responsible for computer hardware, software, and Internet support would be a full-time, paid technology director or coordinator increased with school size, from 29 percent in small schools to 48 percent in large schools (table 6). Differences were also observed by percent minority enrollment; schools with the lowest minority enrollment were more likely than other schools to report that a full-time, paid technology director or coordinator was the person primarily responsible for computer hardware, software, and Internet support (49 percent compared with 32 to 34 percent in other schools).

Figure 2. Percentage distribution of the staff position of those who were primarily responsible for computer hardware, software, and Internet support at the school: 2002



[1]This category includes consultant/outside contractor, teachers or other staff as volunteers, and other.

NOTE: Percentages are based on the 99 percent of public schools with Internet access.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

Students and Computer Access

More children and adolescents in the nation used computers at school than at home in 2001 (DeBell and Chapman 2003). The survey "Internet Access in U.S. Public Schools, Fall 2002" obtained information on various measures of student access to computers at school, such as the ratio of students to instructional computers with Internet access, student access to the Internet outside of regular school hours, the provision of hand-held computers to students and teachers, and laptop loans to students.

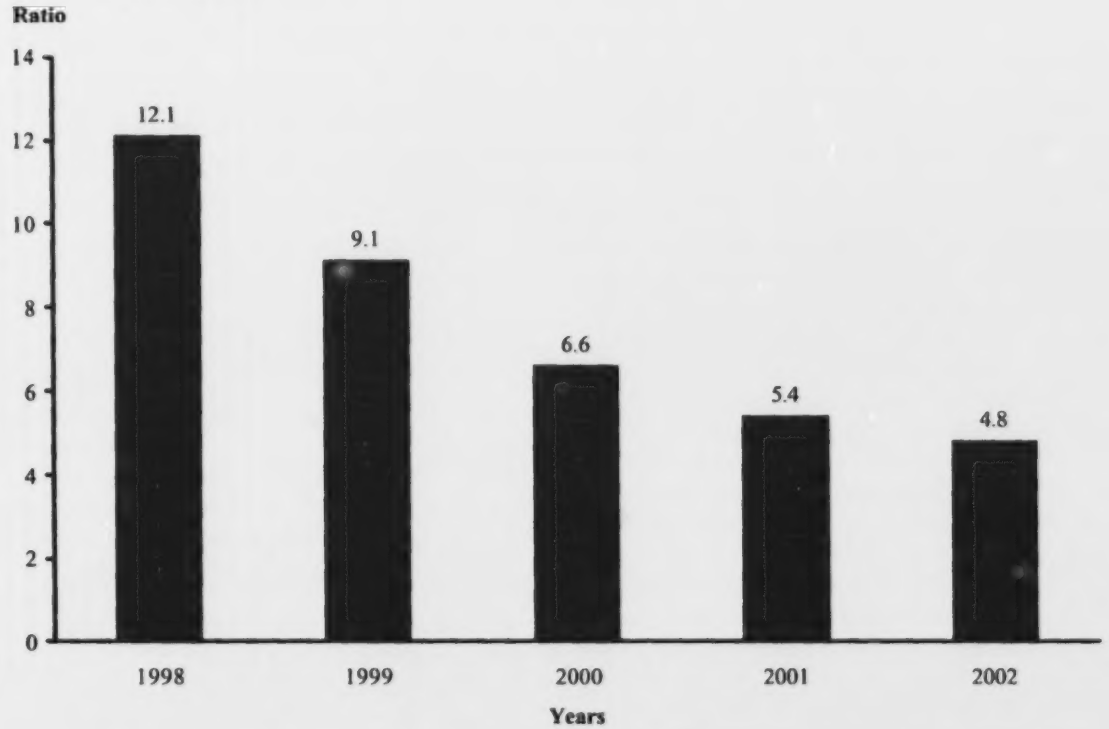
Students Per Instructional Computer With Internet Access

- The ratio of students to instructional computers with Internet access was computed by dividing the total number of students in all public schools by the total number of instructional computers with Internet access in all public schools (i.e., including schools with no Internet access).[5] In 2002, the ratio of students to instructional computers with Internet access in public schools was 4.8 to 1, an improvement from the 12.1 to 1 ratio in 1998, when it was first measured (figure 3 and table 7).

- However, as in previous years (Kleiner and Farris 2002), there were differences by school characteristics in 2002. For example, the ratio of students to instructional computers with Internet access was higher in schools with the highest poverty concentration than in schools with the lowest poverty concentration (5.5 to 1 compared with 4.6 to 1) (table 7). Despite this gap, in schools with the highest poverty concentration, the ratio improved from 6.8 students per computers in 2001 to 5.5 per computer in 2002. The difference between schools with the highest and lowest poverty concentrations in the ratio of students per instructional computer with Internet access decreased from 6.2 students per computer in 1998 to 0.8 students per computer in 2002.

[5]This is one method of calculating students per computer. Another method involves calculating the number of students in each school divided by the number of instructional computers with Internet access in each school and then taking the mean of this ratio across all schools. When "students per computer" was first calculated for this NCES series in 1998, a decision was made to use the first method; this method continues to be used for comparison purposes. A couple of factors influenced the choice of that particular method. There was (and continues to be) considerable skewness in the distribution of students per computer per school. In addition, in 1998, 11 percent of public schools had no instructional computers with Internet access.

Figure 3. Ratio of public school students to instructional computers with Internet access: 1998–2002



NOTE: Ratios are based on all public schools. All of the estimates in this report were recalculated from raw data files using the same computational algorithms. Consequently, some estimates presented here may differ trivially (i.e., 1 percent) from results published prior to 2001.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 1998," FRSS 69, 1998; "Internet Access in U.S. Public Schools, Fall 1999," FRSS 75, 1999; "Internet Access in U.S. Public Schools, Fall 2000," FRSS 79, 2000; "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; and "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

Availability of Computers With Internet Access Outside of Regular School Hours

In 2001, 5- to 17-year-olds whose families were in poverty were less likely to use the Internet at their home than 5- to 17-year-olds whose families were not in poverty (47 percent compared with 82 percent) (DeBell and Chapman 2003). Making the Internet accessible outside of regular school hours allows students who do not have access to the Internet at home to use this resource for school-related activities such as homework.

- In 2002, 53 percent of public schools with Internet access reported that they made computers with access to the Internet available to students outside of regular school hours (table 8). Differences by school characteristics were observed only for instructional level and school size. Secondary schools were more likely to make the

Internet available to students outside of regular school hours than were elementary schools (73 percent compared with 47 percent) (table 8). Similarly, large schools reported making the Internet available to students outside of regular school hours more often than did medium-sized and small schools (79 percent compared with 50 percent for medium-sized and 49 percent for small schools).

- Among schools providing computers with Internet access to students outside of regular school hours in 2002, 96 percent made them available after school; 74 percent, before school; and 6 percent, on weekends (table 8). Availability of computers with Internet access before school was lower in schools with the highest minority enrollment (62 percent) than in schools with the two lowest categories of minority enrollment (80 percent and 78 percent). A similar pattern occurred by school poverty concentration for the availability of computers with Internet access before school, with 57 percent for schools with the highest poverty concentration, compared with 75 percent and 82 percent for schools with the two lowest categories of poverty concentration. There were no differences by school characteristics for the availability of computers with Internet access after school. In addition, there were virtually no differences by school characteristics for the availability of computers with Internet access on weekends.

- In 2002, schools making computers with Internet access available to students outside of regular school hours reported that students had, on average, access to 49 computers with Internet access (table 9). No increase was observed in the average number of computers with Internet access available to students outside of regular school hours between 2001 and 2002.

Provision of Hand-Held Computers

- In 2002, 7 percent of public schools provided hand-held computers to students or teachers for instructional purposes (table 10).[6] No differences were observed by school characteristics.

- Among schools providing hand-held computers to students or teachers for instructional purposes in 2002, the median number of hand-held computers provided per school was 9 (i.e., half of the schools reported a lower number than 9 and the other half a higher number) (not shown in tables).[7]

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[6]Hand-held computers are computers, or personal digital assistants, small enough to be held in one hand. Examples are Palm Pilots or Pocket PCs.

[7]On average, 22 hand-held computers per school were provided to students or teachers in schools that supplied such computers in 2002 (not shown in tables). The average number of hand-held computers would decrease to 18 if the data for 1 school in the sample were taken out of the calculation because the school reported a number of hand-held computers much higher (1,000 hand-held computers) than any of the other schools in the sample (ranging from 1 to 140). The number of hand-held computers at that school was verified with the respondent.

Laptop Computer Loans

In addition to asking about the availability of computers with Internet access outside of regular school hours and the provision of hand-held computers to students or teachers, the survey asked whether the schools lent laptop computers to students, how many laptops were available for loan, and the maximum length of time for which they could be borrowed. If schools did not lend laptop computers to students in 2002, a question inquired whether they planned to lend them in the 2003–04 school year.

- In 2002, 8 percent of public schools lent laptop computers to students (table 11).[8] In those schools, the median number of laptop computers available for loan was 7 (not shown in tables). This represents 1 laptop computer for 16 students (not shown in tables).[9] Fifty-nine percent of schools lending laptop computers reported that students could borrow them for less than 1 week, 19 percent reported that students could borrow them for a period of 1 week to less than 1 month, and 16 percent reported lending laptops for the entire school year (table 12).

- Of the 92 percent of schools without laptop computers available for loan to students in 2002 (see table 11), 7 percent were planning to make laptops available for students to borrow during the 2003–04 school year (table 13). No differences were observed by school characteristics.

School Web Sites

Since 99 percent of public schools were connected to the Internet in 2002, most schools had the capability to make information available to parents and students directly via e-mail or through a web site. The survey asked whether the schools had a web site or a web page (for example, a web page on the district's web site), how often it was updated, and who was primarily responsible for the school's web site or web page support.[10]

- Nationwide, 86 percent of public schools with access to the Internet had a web site or web page in 2002 (table 14). This is an increase from 2001, when 75 percent of public schools reported having a web site. There were differences by school characteristics in the likelihood of having a web site or web page. For example, the likelihood of having a web site or a web page was lower in schools with the highest minority enrollment than

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[8]The difference between the percent of schools lending laptop computers to students in 2002 (8 percent) and in 2001 (10 percent) is not statistically significant.

[9]The ratio of students per laptop computer would increase to 19.9 to 1 if 1 school in the sample were taken out of the calculation because the school reported a number of laptop computers much higher (2,700) than any of the other schools in the sample (ranging from 1 to 850). The number of laptop computers at that school was verified with the respondent.

[10]In 2001, the questionnaire asked about the school's "web site." In 2002, the wording was changed to "web site or web page."

in other schools (76 percent compared with 87 to 92 percent). The likelihood of having a web site or web page also decreased as the poverty concentration increased: from 94 percent of schools with the lowest poverty concentration to 66 percent of schools with the highest poverty concentration.

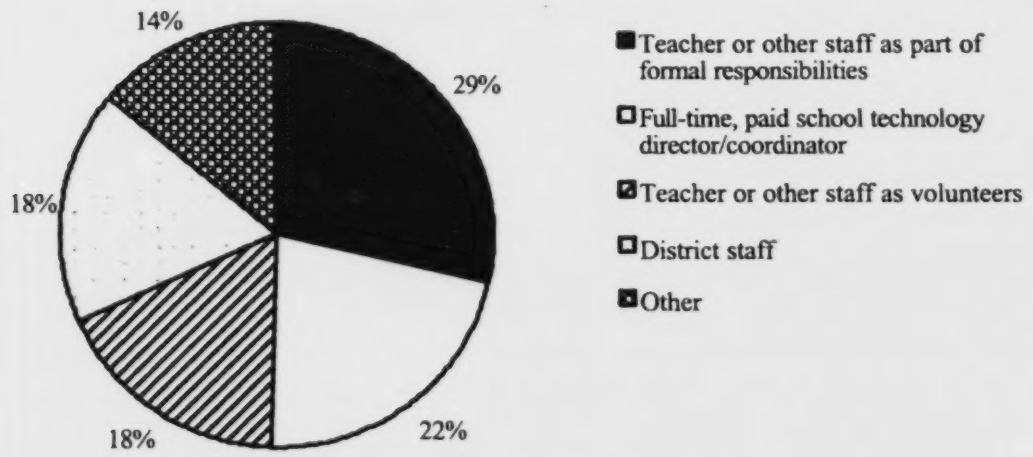
- Of the schools having a web site or a web page, 68 percent reported that their web site or web page was updated at least monthly (see table 15).[11] Among the 32 percent of schools updating their web site or web page less often than monthly, differences by school characteristics were observed. For example, schools with the highest minority enrollment (49 percent) were more likely to update their web site or web page less than monthly than other schools (22 percent to 30 percent). The likelihood of updating the web site or web page less than monthly also increased with poverty concentration of the schools (from 22 percent for schools with the lowest poverty concentration to 51 percent for schools with the highest poverty concentration).

- Among schools having a web site or web page, 29 percent reported that a teacher or other staff member was primarily responsible for the school's web site or web page support as part of his or her formal responsibilities (table 16 and figure 4). Schools also reported that primary responsibility was assigned to a full-time, paid school technology director or coordinator (22 percent), a teacher or other staff as volunteers (18 percent), district staff (18 percent), a part-time, paid school technology director or coordinator (5 percent), students (2 percent), or a consultant or outside contractor (2 percent). Some other person was cited by 4 percent of the schools.

- The likelihood of having a teacher or other staff primarily responsible for the school's web site as part of his or her formal responsibilities was higher in secondary schools (35 percent) than in elementary schools (28 percent). The likelihood also increased with school size (from 26 percent in small schools to 39 percent in large schools) (table 16).

[11]This estimate is derived from the percentage of public schools updating their web site monthly, weekly, or daily. Although estimates for the details are shown in table 15, the total in the text is based on the raw data and because of rounding, it differs slightly from the estimate that would be obtained by adding details directly from the table.

Figure 4. Percentage distribution of types of staff and students who were primarily responsible for the school's web site or web page support: 2002



[1]This category includes part-time, paid school technology director/coordinator, students, consultant/outside contractor, and other.

NOTE: Percentages are based on 85 percent of public schools (99 percent with Internet access times 86 percent with a web site or web page). Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

Technologies and Procedures to Prevent Student Access to Inappropriate Material on the Internet

Given the diversity of the information carried on the Internet, student access to inappropriate material is a major concern of many parents and teachers. Moreover, under the Children's Internet Protection Act (CIPA), no school may receive E-rate[12] discounts unless it certifies that it is enforcing a policy of Internet safety that includes the use of filtering or blocking technology.[13]

[12]The Education rate (E-rate) program was established in 1996 to make telecommunications services, Internet access, and internal connections available to schools and libraries at discounted rates based upon the income level of the students in their community and whether their location is urban or rural.

[13]More information about CIPA (Public Law 106-554) can be found at the web site of the Schools and Libraries Division, Universal Service Administrative Company (http://www.sl.universalservice.org/reference/CIPA.asp). The law is effective for Funding Year 4 (July 1, 2001, to June 30, 2002) and for all future years. Schools and libraries receiving only telecommunications services are excluded from the requirements of CIPA.

- In 2002, almost all public schools with Internet access (99 percent) used various technologies or procedures to control student access to inappropriate material on the Internet (table 17). Across all school characteristiics, between 98 and 100 percent of schools reported using these technologies or procedures. In addition, 99 percent of these schools used at least one of these technologies or procedures on all Internet-connected computers used by students (table 17).

- Among schools using technologies or procedures to prevent student access to inappropriate material on the Internet in 2002, 96 percent used blocking or filtering software (table 18). Ninety-one percent of schools reported that teachers or other staff members monitored student Internet access, 82 percent had a written contract that parents have to sign, 77 percent had a contract that students have to sign, 52 percent used monitoring software, 41 percent had honor codes, and 32 percent allowed access only to their intranet.[14] As these numbers suggest, most of the schools (96 percent) used more than one procedure or technology as part of their Internet use policy (not shown in tables).

- Ninety percent of public schools using technologies or procedures to prevent student access to inappropriate material on the Internet indicated that they disseminated the information about these technologies or other procedures to students and parents via their school policies or rules distributed to students and parents (table 19). Sixty-four percent did so with a special notice to parents, 57 percent used their newsletters to disseminate this information, 32 percent posted a message on the school web site or web page, 24 percent had a notice on a bulletin board at the school, 15 percent had a pop-up message at computer or Internet log on, and 5 percent used a method other than the ones listed above.

Teacher Professional Development on How to Integrate the Use of the Internet into the Curriculum

Although approximately one-half of public school teachers in 1999 reported that they used computers or the Internet for instruction during class time, and/or that they assigned their students work that involves research using the Internet, one-third of teachers reported feeling well or very well prepared (Smerdon et al. 2000). The survey "Internet Access in U.S. Public Schools, Fall 2002" asked about teacher professional development on how to integrate the use of the Internet into the curriculum.

- Nationwide, 87 percent of public schools with Internet access indicated that their school or school district had offered professional development to teachers in their school on how to integrate the use of the Internet into the curriculum in the 12 months prior to the fall 2002 survey (table 20).

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[14] An intranet is a controlled computer network similar to the Internet, but accessible only to those who have permission to use it. For example, school administrators can restrict student access to only their school's intranet, which may include information from the Internet chosen by school officials, rather than full Internet access.

- Forty-two percent of the schools that had professional development had 1 to 25 percent of their teachers attending such professional development in the 12 months preceding the survey. Seventeen percent of the schools had 26 to 50 percent of their teachers, 11 percent of the schools had 51 to 75 percent of their teachers, and 30 percent of the schools had 76 percent or more of their teachers attending professional development on how to integrate the use of the Internet into the curriculum in the 12 months preceding the survey (table 20). Another 1 percent reported not having any teachers attending such professional development during this time frame.

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Tables of Estimates and Standard Errors

Table 1. Percent of public schools with Internet access, by school characteristics: 1994–2002

School characteristic	Public schools with Internet access								
	1994	1995	1996	1997	1998	1999	2000	2001	2002
All public schools	35	50	65	78	89	95	98	99	99
Instructional level[1]									
Elementary	30	46	61	75	88	94	97	99	99
Secondary	49	65	77	89	94	98	100[2]	100[2]	100[2]
School size									
Less than 300	30	39	57	75	87	96	96	99	96
300 to 999	35	52	66	78	89	94	98	99	100[2]
1,000 or more	58	69	80	89	95	96	99	100	100
Locale									
City	40	47	64	74	92	93	96	97	99
Urban fringe	38	59	75	78	85	96	98	99	100
Town	29	47	61	84	90	94	98	100	98
Rural	35	48	60	79	92	96	99	100[2]	98
Percent minority enrollment[3]									
Less than 6 percent	38	52	65	84	91	95	98	99	97
6 to 20 percent	38	58	72	87	93	97	100	100	100
21 to 49 percent	38	55	65	73	91	96	98	100	99
50 percent or more	27	39	56	63	82	92	96	98	99
Percent of students eligible for free or reduced-price lunch[4]									
Less than 35 percent	39	60	74	86	92	95	99	99	98
35 to 49 percent	35	48	59	81	93	98	99	100	100
50 to 74 percent	32	41	53	71	88	96	97	99	100
75 percent or more	18	31	53	62	79	89	94	97	99

[1]Data for combined schools are included in the totals and in analyses by other school characteristics but are not shown separately.

[2]The estimate fell between 99.5 percent and 100 percent and therefore was rounded to 100 percent.

[3]Percent minority enrollment was not available for some schools. In 1994, this information was missing for 100 schools. In subsequent years, the missing information ranged from 0 schools to 46 schools. In 2002, this information was missing for 15 schools. The weighted response rate was 98.6 percent.

[4]Percent of students eligible for free or reduced-price lunch was not available for some schools. In the 1994 survey, free and reduced-price lunch data came from the Common Core of Data (CCD) only and were missing for 430 schools. In reports prior to 1998, free and reduced-price lunch data were not reported for 1994. In 1998, a decision was made to include the data for 1994 for comparison purposes. In subsequent years, free and reduced-price lunch information was obtained on the questionnaire, supplemented, if necessary, with CCD data. Missing data ranged from 0 schools (2002) to 10 schools (1999).

NOTE: All of the estimates in this report were recalculated from raw data files using the same computational algorithms. Consequently, some estimates presented here may differ trivially (i.e., 1 percent) from results published prior to 2001.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Survey on Advanced Telecommunications in U.S. Public Schools, K–12," FRSS 51, 1994; "Survey on Advanced Telecommunications in U.S. Public Schools, K–12," FRSS 57, 1995; "Advanced Telecommunications in U.S. Public Schools, Fall 1996," FRSS 61, 1996; "Internet Access in U.S. Public Schools, Fall 1997," FRSS 64, 1997; "Internet Access in U.S. Public Schools, Fall 1998," FRSS 69, 1998; "Internet Access in U.S. Public Schools, Fall 1999," FRSS 75, 1999; "Internet Access in U.S. Public Schools, Fall 2000," FRSS 79, 2000; "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; and "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

Table 1a. Standard errors of the percent of public schools with Internet access, by school characteristics: 1994–2002

School characteristic	Public schools with Internet access								
	1994	1995	1996	1997	1998	1999	2000	2001	2002
All public schools	1.5	1.8	1.8	1.5	1.3	0.8	0.5	0.3	0.5
Instructional level									
Elementary	1.9	2.4	2.1	2.0	1.6	1.0	0.7	0.4	0.6
Secondary	2.4	2.7	1.8	1.7	2.1	0.8	0.2	0.2	0.5
School size									
Less than 300	3.4	3.9	4.4	3.8	3.4	1.5	1.7	1.0	1.7
300 to 999	2.0	2.2	2.0	2.0	1.4	1.0	0.5	0.4	0.2
1,000 or more	3.0	4.1	3.4	2.5	2.4	1.7	0.6	†	†
Locale									
City	3.1	4.3	4.5	3.8	2.1	1.5	1.1	1.4	0.7
Urban fringe	2.9	3.8	3.3	2.8	2.8	1.2	1.2	0.5	†
Town	2.3	3.7	4.0	4.6	3.2	2.5	1.2	†	2.2
Rural	2.7	3.8	3.3	3.2	3.4	1.4	0.9	0.1	1.0
Percent minority enrollment									
Less than 6 percent	2.4	3.2	3.4	2.7	2.9	1.5	1.2	0.9	1.6
6 to 20 percent	3.3	4.7	3.0	2.7	2.5	1.2	†	†	†
21 to 49 percent	3.2	4.1	3.2	4.1	2.5	1.8	1.2	†	0.7
50 percent or more	2.9	3.8	4.6	4.7	2.9	1.9	1.2	0.9	0.5
Percent of students eligible for free or reduced-price lunch									
Less than 35 percent	2.3	2.4	2.2	1.8	2.0	1.1	0.7	0.6	1.0
35 to 49 percent	4.6	3.9	4.8	3.9	2.2	0.9	0.7	†	†
50 to 74 percent	5.0	4.6	5.1	4.0	3.0	1.7	1.3	0.5	†
75 percent or more	4.6	4.4	5.4	5.3	3.7	3.1	1.7	1.1	0.9

†Estimate of standard error is not derived because it is based on an estimate of 100 percent.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Survey on Advanced Telecommunications in U.S. Public Schools, K–12," FRSS 51, 1994; "Survey on Advanced Telecommunications in U.S. Public Schools, K–12," FRSS 57, 1995; "Advanced Telecommunications in U.S. Public Schools, Fall 1996," FRSS 61, 1996; "Internet Access in U.S. Public Schools, Fall 1997," FRSS 64, 1997; "Internet Access in U.S. Public Schools, Fall 1998," FRSS 69, 1998; "Internet Access in U.S. Public Schools, Fall 1999," FRSS 75, 1999; "Internet Access in U.S. Public Schools, Fall 2000," FRSS 79, 2000; "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; and "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

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Table 2. Percent of public school instructional rooms with Internet access, by school characteristics: 1994–2002

School characteristic	Instructional rooms with Internet access								
	1994	1995	1996	1997	1998	1999	2000	2001	2002
All public schools	3	8	14	27	51	64	77	87	92
Instructional level[1]									
Elementary	3	8	13	24	51	62	76	86	92
Secondary	4	8	16	32	52	67	79	88	91
School size									
Less than 300	3	9	15	27	54	71	83	87	91
300 to 999	3	8	13	28	53	64	78	87	93
1,000 or more	3	4	16	25	45	58	70	86	89
Locale									
City	4	6	12	20	47	52	66	82	88
Urban fringe	4	8	16	29	50	67	78	87	92
Town	3	8	14	34	55	72	87	91	96
Rural	3	8	14	30	57	71	85	89	93
Percent minority enrollment[2]									
Less than 6 percent	4	9	18	37	57	74	85	88	93
6 to 20 percent	4	10	18	35	59	78	83	90	94
21 to 49 percent	4	9	12	22	52	64	79	89	91
50 percent or more	2	3	5	13	37	43	64	81	89
Percent of students eligible for free or reduced-price lunch[3]									
Less than 35 percent	3	10	17	33	57	73	82	90	93
35 to 49 percent	2	6	12	33	60	69	81	89	90
50 to 74 percent	4	6	11	20	41	61	77	87	91
75 percent or more	2	3	5	14	38	38	60	79	89

[1]Data for combined schools are included in the totals and in analyses by other school characteristics but are not shown separately.

[2]Percent minority enrollment was not available for some schools. In 1994, this information was missing for 100 schools. In subsequent years, the missing information ranged from 0 schools to 46 schools. In 2002, this information was missing for 15 schools. The weighted response rate was 98.6 percent.

[3]Percent of students eligible for free or reduced-price lunch was not available for some schools. In the 1994 survey, free and reduced-price lunch data came from the Common Core of Data (CCD) only and were missing for 430 schools. In reports prior to 1998, free and reduced-price lunch data were not reported for 1994. In 1998, a decision was made to include the data for 1994 for comparison purposes. In subsequent years, free and reduced-price lunch information was obtained on the questionnaire, supplemented, if necessary with CCD data. Missing data ranged from 0 schools (2002) to 10 schools (1999).

NOTE: Percentages are based on all schools. All of the estimates in this report were recalculated from raw data files using the same computational algorithms. Consequently, some estimates presented here may differ trivially (i.e., 1 percent) from results published prior to 2001.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Survey on Advanced Telecommunications in U.S. Public Schools, K–12," FRSS 51, 1994; "Survey on Advanced Telecommunications in U.S. Public Schools, K–12," FRSS 57, 1995; "Advanced Telecommunications in U.S. Public Schools, Fall 1996," FRSS 61, 1996; "Internet Access in U.S. Public Schools, Fall 1997," FRSS 64, 1997; "Internet Access in U.S. Public Schools, Fall 1998," FRSS 69, 1998; "Internet Access in U.S. Public Schools, Fall 1999," FRSS 75, 1999; "Internet Access in U.S. Public Schools, Fall 2000," FRSS 79, 2000; "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; and "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

Table 2a. Standard errors of the percent of public school instructional rooms with Internet access, by school characteristics: 1994–2002

School characteristic	Instructional rooms with Internet access								
	1994	1995	1996	1997	1998	1999	2000	2001	2002
All public schools	0.3	0.7	1.0	1.6	1.8	1.6	1.1	0.9	0.6
Instructional level									
Elementary	0.4	1.0	1.5	1.9	2.3	1.8	1.5	1.1	0.8
Secondary	0.6	1.0	1.5	1.9	2.1	2.6	1.6	1.2	1.0
School size									
Less than 300	0.7	1.6	2.9	4.3	3.7	3.2	2.8	2.1	1.9
300 to 999	0.5	1.0	1.2	2.0	2.2	1.9	1.5	1.1	0.7
1,000 or more	0.6	1.0	2.1	2.4	3.9	3.0	2.2	1.7	1.7
Locale									
City	0.8	1.3	1.6	2.2	3.2	2.6	2.2	2.1	1.6
Urban fringe	0.8	1.4	2.2	2.9	2.9	2.5	2.0	1.3	0.9
Town	0.6	2.0	1.9	3.9	4.0	3.4	2.6	2.2	1.1
Rural	0.4	1.5	2.2	3.6	3.6	3.0	1.7	1.3	1.0
Percent minority enrollment									
Less than 6 percent	0.7	1.4	2.4	3.5	2.7	2.3	1.9	1.5	1.4
6 to 20 percent	0.8	1.5	1.7	3.0	3.3	3.1	2.1	1.6	1.0
21 to 49 percent	1.0	2.1	2.5	2.8	3.7	3.1	2.3	2.0	1.2
50 percent or more	0.3	1.0	1.8	1.8	3.2	2.8	2.4	2.0	1.4
Percent of students eligible for free or reduced-price lunch									
Less than 35 percent	0.5	1.2	1.6	2.0	2.4	2.3	1.5	1.2	0.8
35 to 49 percent	0.4	1.4	2.2	4.3	5.1	3.4	2.9	2.2	2.1
50 to 74 percent	1.8	1.9	2.8	3.7	3.9	3.1	2.8	2.4	1.4
75 percent or more	0.9	1.0	1.8	2.4	4.3	4.4	3.3	2.4	1.9

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Survey on Advanced Telecommunications in U.S. Public Schools, K–12," FRSS 51, 1994; "Survey on Advanced Telecommunications in U.S. Public Schools, K–12," FRSS 57, 1995; "Advanced Telecommunications in U.S. Public Schools, Fall 1996," FRSS 61, 1996; "Internet Access in U.S. Public Schools, Fall 1997," FRSS 64, 1997; "Internet Access in U.S. Public Schools, Fall 1998," FRSS 69, 1998; "Internet Access in U.S. Public Schools, Fall 1999," FRSS 75, 1999; "Internet Access in U.S. Public Schools, Fall 2000," FRSS 79, 2000; "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; and "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

Table 3. Percent of public schools with Internet access using broadband connections, by school characteristics: 2000–2002

School characteristic	Use broadband connections			
	2000[1]	2001[1]	2002[2]	Percentage change 2000–2002[3]
All public schools	80	85	94	+17
Instructional level[4]				
Elementary	77	83	93	+20
Secondary	89	94	98	+10
School size				
Less than 300	67	72	90	+35
300 to 999	83	89	94	+13
1,000 or more	90	96	100	+11
Locale				
City	80	88	97	+22
Urban fringe	85	88	92	+9
Town	79	83	97	+23
Rural	75	82	91	+21
Percent minority enrollment[5]				
Less than 6 percent	76	81	92	+21
6 to 20 percent	82	85	91	+11
21 to 49 percent	84	85	96	+14
50 percent or more	81	93	95	+18
Percent of students eligible for free or reduced-price lunch[6]				
Less than 35 percent	81	84	93	+14
35 to 49 percent	82	86	96	+16
50 to 74 percent	79	84	93	+17
75 percent or more	75	90	95	+27

[1]Respondents were instructed to circle as many types of connections as there were in the school. The data were then combined to show the percentage of schools using broadband connections. Percentages include schools using only broadband connections, as well as schools using both broadband and narrowband connections. They do not include schools using narrowband connections exclusively. Broadband connections include T3/DS3, fractional T3, T1/DS1, fractional T1, and cable modem connections. In 2001, they also included DSL connections, which had not been on the 2000 questionnaire.

[2]The 2002 questionnaire directly asked whether the schools used broadband and narrowband connections. Broadband connections include T3/DS3, fractional T3, T1/DS1, fractional T1, cable modem, and DSL connections.

[3]This percentage was calculated as follows: [(e2001-e2000)/e2000] x 100, where "e" stands for "estimate."

[4]Data for combined schools are included in the totals and in analyses by other school characteristics but are not shown separately.

[5]Percent minority enrollment was not available for 9 schools in 2000 and 31 schools in 2001. In 2002, this information was missing for 15 schools. The weighted response rate was 98.6 percent.

[6]Percent of students eligible for free or reduced-price lunch was not available for 2 schools in 2000 and 2001. This information was available for all schools in 2002.

NOTE: Percentages are based on the percent of public schools with Internet access: 98 percent in 2000 and 99 percent in 2001 and 2002.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2000," FRSS 79, 2000; "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; and "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

Table 3a. Standard errors of the percent of public schools with Internet access using broadband connections, by school characteristics: 2000–2002

School characteristic	Use broadband connections			
	2000	2001	2002	Percentage change 2000–2002
All public schools	1.5	1.6	1.0	0.4
Instructional level				
Elementary	1.9	2.0	1.2	0.6
Secondary	2.0	1.2	0.9	0.2
School size				
Less than 300	4.4	4.3	2.6	2.3
300 to 999	1.8	1.4	1.2	0.2
1,000 or more	2.4	1.4	†	0.2
Locale				
City	3.0	2.4	1.1	0.6
Urban fringe	2.6	2.1	1.9	0.3
Town	4.9	4.6	1.8	1.4
Rural	3.5	3.0	2.0	0.9
Percent minority enrollment				
Less than 6 percent	3.2	3.6	2.4	1.1
6 to 20 percent	2.9	3.0	2.3	0.5
21 to 49 percent	2.6	2.7	1.5	0.5
50 percent or more	2.6	1.8	1.5	0.4
Percent of students eligible for free or reduced-price lunch				
Less than 35 percent	2.3	2.6	1.7	0.5
35 to 49 percent	4.0	2.8	2.0	0.6
50 to 74 percent	3.8	3.8	2.0	0.8
75 percent or more	3.6	2.7	1.7	0.9

†Estimate of standard error is not derived because it is based on an estimate of 100 percent.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2000," FRSS 79, 2000; "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; and "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

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Table 4. Percent of public schools using any types of wireless Internet connections, and of those schools, percent using broadband wireless Internet connections, by school characteristics: 2002

School characteristic	Use any types of wireless Internet connections[1]	Use broadband wireless Internet connections[2]
All public schools	23	88
Instructional level[3]		
Elementary	20	87
Secondary	33	91
School size		
Less than 300	17	‡
300 to 999	23	91
1,000 or more	37	95
Locale		
City	25	100
Urban fringe	23	93
Town	23	82
Rural	22	76
Percent minority enrollment[4]		
Less than 6 percent	21	84
6 to 20 percent	23	82
21 to 49 percent	25	96
50 percent or more	23	92
Percent of students eligible for free or reduced-price lunch		
Less than 35 percent	24	87
35 to 49 percent	25	88
50 to 74 percent	23	87
75 percent or more	20	93

‡Reporting standards not met.

[1]Percentages are based on the 99 percent of public schools with Internet access. Percentages include schools using wireless Internet connections (both broadband and narrowband) only as well as schools using both wireless and wired connections.

[2]Percentages are based on 23 percent of public schools (99 percent with Internet access times 23 percent using wireless Internet connections).

[3]Data for combined schools are included in the totals and in analyses by other school characteristics but are not shown separately.

[4]Percent minority enrollment was not available for 15 schools. The weighted response rate was 98.6 percent.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

Table 4a. Standard errors of the percent of public schools using any types of wireless Internet connections, and of those schools, standard errors of the percent using broadband wireless Internet connections, by school characteristics: 2002

School characteristic	Use any types of wireless Internet connections	Use broadband wireless Internet connections
All public schools	1.5	2.9
Instructional level		
Elementary	1.7	4.3
Secondary	1.9	2.6
School size		
Less than 300	3.5	‡
300 to 999	1.8	2.4
1,000 or more	3.4	1.9
Locale		
City	2.8	†
Urban fringe	2.3	3.1
Town	3.6	9.7
Rural	3.1	6.8
Percent minority enrollment		
Less than 6 percent	2.6	6.8
6 to 20 percent	3.2	6.3
21 to 49 percent	3.6	2.6
50 percent or more	2.3	3.8
Percent of students eligible for free or reduced-price lunch		
Less than 35 percent	2.7	5.3
35 to 49 percent	4.4	5.3
50 to 74 percent	2.8	5.0
75 percent or more	3.0	4.9

†Estimate of standard error is not derived because it is based on an estimate of 100 percent.

‡Reporting standards not met.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

Table 5. Percent of public school instructional rooms with wireless Internet connections, by school characteristics: 2002

School characteristic	Instructional rooms with wireless Internet connections
All public schools	15
Instructional level[1]	
Elementary	13
Secondary	19
School size	
Less than 300	12
300 to 999	14
1,000 or more	19
Locale	
City	14
Urban fringe	16
Town	14
Rural	15
Percent minority enrollment[2]	
Less than 6 percent	14
6 to 20 percent	13
21 to 49 percent	15
50 percent or more	16
Percent of students eligible for free or reduced-price lunch	
Less than 35 percent	15
35 to 49 percent	15
50 to 74 percent	17
75 percent or more	11

[1]Data for combined schools are included in the totals and in analyses by other school characteristics but are not shown separately.

[2]Percent minority enrollment was not available for 15 schools. The weighted response rate was 98.6 percent.

NOTE: Percentages are based on all public schools.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

Table 5a. Standard errors of the percent of public school instructional rooms with wireless Internet connections, by school characteristics: 2002

School characteristic	Instructional rooms with wireless Internet connections
All public schools	1.1
Instructional level	
Elementary	1.3
Secondary	1.6
School size	
Less than 300	2.8
300 to 999	1.4
1,000 or more	2.6
Locale	
City	2.0
Urban fringe	2.0
Town	2.7
Rural	2.2
Percent minority enrollment	
Less than 6 percent	2.2
6 to 20 percent	2.1
21 to 49 percent	3.1
50 percent or more	1.9
Percent of students eligible for free or reduced-price lunch	
Less than 35 percent	1.6
35 to 49 percent	3.1
50 to 74 percent	2.5
75 percent or more	2.1

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

Table 6. Percentage distribution of the staff position of those who were primarily responsible for computer hardware, software, and Internet support at the school, by school characteristics: 2002

School characteristic	Full-time, paid school technology director/ coordinator	District staff	Teacher or other staff as part of formal respon-sibilities	Part-time, paid school technology director/ coordinator	Consultant/ outside contractor	Teacher or other staff as volunteers	Other
All public schools	38	26	18	11	3	3	1
Instructional level[1]							
Elementary	35	28	18	12	2	4	1
Secondary	47	22	16	9	3	2	‡
School size							
Less than 300	29	21	20	19	5	5	‡
300 to 999	39	29	17	9	2	3	1
1,000 or more	48	26	18	5	‡	2	‡
Locale							
City	26	31	26	8	3	5	‡
Urban fringe	40	28	17	9	3!	2	2
Town	40	30	14	11	3!	‡	‡
Rural	42	20	15	17	2!	5	‡
Percent minority enrollment[2]							
Less than 6 percent	49	17	12	15	3	3	‡
6 to 20 percent	34	30	12	15	3!	3	2!
21 to 49 percent	32	28	25	10	‡	3	‡
50 percent or more	33	30	25	6	3	4	‡
Percent of students eligible for free or reduced-price lunch							
Less than 35 percent	42	23	14	14	3	2	1!
35 to 49 percent	37	29	18	9	‡	5	‡
50 to 74 percent	33	32	18	13	1!	2	‡
75 percent or more	33	25	28	6	3	5	#

#Rounds to zero.

!Interpret data with caution; the coefficient of variation is greater than 50 percent.

‡Reporting standards not met.

[1]Data for combined schools are included in the totals and in analyses by other school characteristics but are not shown separately.

[2]Percent minority enrollment was not available for 15 schools. The weighted response rate was 98.6 percent.

NOTE: Percentages are based on the 99 percent of public schools with Internet access. Detail may not sum to totals because of rounding and not reporting where there are too few cases for a reliable estimate.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

Table 6a. Standard errors of the percentage distribution of the staff position of those who were primarily responsible for computer hardware, software, and Internet support at the school, by school characteristics: 2002

School characteristic	Full-time, paid school technology director/ coordinator	District staff	Teacher or other staff as part of formal respon-sibilities	Part-time, paid school technology director/ coordinator	Consultant/ outside contractor	Teacher or other staff as volunteers	Other
All public schools	1.6	1.4	1.3	1.1	0.7	0.6	0.3
Instructional level							
Elementary	1.8	1.7	1.8	1.5	0.9	0.8	0.4
Secondary	3.3	2.2	1.9	1.7	1.2	0.7	‡
School size							
Less than 300	3.6	3.9	2.9	3.5	2.1	1.8	‡
300 to 999	2.0	1.7	1.6	1.2	0.6	0.7	0.4
1,000 or more	3.5	3.0	2.8	1.7	‡	0.6	‡
Locale							
City	3.0	3.6	3.4	2.1	1.1	2.0	‡
Urban fringe	3.3	2.6	2.6	2.0	1.8	0.7	0.7
Town	4.7	3.9	4.4	2.5	1.9	‡	‡
Rural	3.2	2.6	2.0	2.6	1.1	1.3	‡
Percent minority enrollment							
Less than 6 percent	3.6	3.0	2.6	2.9	1.5	1.5	‡
6 to 20 percent	3.5	3.8	2.5	2.7	1.7	1.5	0.9
21 to 49 percent	4.1	3.5	3.2	2.3	‡	1.2	‡
50 percent or more	2.7	3.2	2.9	1.2	1.0	1.1	‡
Percent of students eligible for free or reduced-price lunch							
Less than 35 percent	2.8	2.1	2.1	2.3	1.5	1.0	0.5
35 to 49 percent	4.5	4.0	3.0	3.2	‡	2.1	‡
50 to 74 percent	3.7	3.7	2.8	2.4	0.6	1.0	‡
75 percent or more	3.6	3.4	4.0	1.9	1.3	2.0	†

†Estimate of standard error is not derived because it is based on an estimate of 0 percent.

‡Reporting standards not met.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

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Table 7. Ratio of public school students to instructional computers with Internet access, by school characteristics: 1998–2002

School characteristic	Ratio of students to instructional computers with Internet access				
	1998	1999	2000	2001	2002
All public schools	12.1	9.1	6.6	5.4	4.8
Instructional level[1]					
Elementary	13.6	10.6	7.8	6.1	5.2
Secondary	9.9	7.0	5.2	4.3	4.1
School size					
Less than 300	9.1	5.7	3.9	4.1	3.1
300 to 999	12.3	9.4	7.0	5.6	5.0
1,000 or more	13.0	10.0	7.2	5.4	5.1
Locale					
City	14.1	11.4	8.2	5.9	5.5
Urban fringe	12.4	9.1	6.6	5.7	4.9
Town	12.2	8.2	6.2	5.0	4.4
Rural	8.6	6.6	5.0	4.6	4.0
Percent minority enrollment[2]					
Less than 6 percent	10.1	7.0	5.7	4.7	4.0
6 to 20 percent	10.4	7.8	5.9	4.9	4.6
21 to 49 percent	12.1	9.5	7.2	5.5	5.2
50 percent or more	17.2	13.3	8.1	6.4	5.1
Percent of students eligible for free or reduced-price lunch[3]					
Less than 35 percent	10.6	7.6	6.0	4.9	4.6
35 to 49 percent	10.9	9.0	6.3	5.2	4.5
50 to 74 percent	15.8	10.0	7.2	5.6	4.7
75 percent or more	16.8	16.8	9.1	6.8	5.5

[1]Data for combined schools are included in the totals and in analyses by other school characteristics but are not shown separately.

[2]Percent minority enrollment was not available for some schools. Over the years, the missing information ranged from 0 schools (1999) to 31 schools (2001). In 2002, this information was missing for 15 schools. The weighted response rate was 98.6 percent.

[3]Percent of students eligible for free or reduced-price lunch was not available for some schools. Over the years, the missing information ranged from 0 schools (2002) to 10 schools (1999).

NOTE: Ratios are based on all public schools. All of the estimates in this report were recalculated from raw data files using the same computational algorithms. Consequently, some estimates presented here may differ trivially (i.e., 1 percent) from results published prior to 2001.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 1998," FRSS 69, 1998; "Internet Access in U.S. Public Schools, Fall 1999," FRSS 75, 1999; "Internet Access in U.S. Public Schools, Fall 2000," FRSS 79, 2000; "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; and "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

Table 7a. Standard errors of the ratio of public school students to instructional computers with Internet access, by school characteristics: 1998–2002

School characteristic	Ratio of students to instructional computers with Internet access				
	1998	1999	2000	2001	2002
All public schools	0.6	0.3	0.1	0.1	0.1
Instructional level					
Elementary	0.9	0.4	0.2	0.2	0.2
Secondary	0.4	0.3	0.2	0.1	0.1
School size					
Less than 300	0.7	0.4	0.3	0.3	0.2
300 to 999	0.7	0.4	0.2	0.1	0.2
1,000 or more	1.0	0.6	0.3	0.2	0.2
Locale					
City	1.2	0.8	0.4	0.2	0.2
Urban fringe	0.9	0.4	0.2	0.2	0.2
Town	1.2	0.6	0.3	0.3	0.4
Rural	0.8	0.4	0.3	0.1	0.2
Percent minority enrollment					
Less than 6 percent	0.6	0.3	0.2	0.2	0.2
6 to 20 percent	1.1	0.5	0.2	0.2	0.2
21 to 49 percent	1.1	0.7	0.3	0.2	0.2
50 percent or more	1.7	1.1	0.4	0.2	0.2
Percent of students eligible for free or reduced-price lunch					
Less than 35 percent	0.6	0.3	0.2	0.2	0.1
35 to 49 percent	1.2	0.4	0.4	0.2	0.3
50 to 74 percent	1.4	0.8	0.4	0.3	0.2
75 percent or more	2.5	2.2	0.7	0.3	0.3

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 1998," FRSS 69, 1998; "Internet Access in U.S. Public Schools, Fall 1999," FRSS 75, 1999; "Internet Access in U.S. Public Schools, Fall 2000," FRSS 79, 2000; "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; and "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

Table 8. Percent of public schools allowing students to access the Internet outside of regular school hours, by school characteristics: 2001–02

School characteristic	Internet available to students outside of regular school hours[1]		Time of availability[2]					
			After school		Before school		On weekends	
	2001	2002	2001	2002	2001	2002	2001	2002
All public schools	51	53	95	96	74	74	6	6
Instructional level[3]								
Elementary	42	47	94	95	69	69	4	6
Secondary	78	73	97	98	85	83	8	8
School size								
Less than 300	47	49	91	93	79	79	9	7
300 to 999	47	50	96	96	71	69	4	5
1,000 or more	82	79	98	98	82	84	7	8
Locale								
City	49	55	96	99	64	62	4	9
Urban fringe	45	51	94	97	78	76	4	6
Town	52	50	97	98	78	76	3	7
Rural	58	54	95	92	76	79	8	4!
Percent minority enrollment[4]								
Less than 6 percent	50	52	95	95	84	78	6	6
6 to 20 percent	45	50	97	96	74	80	9	2
21 to 49 percent	52	54	95	96	74	77	2!	6
50 percent or more	56	54	96	97	66	62	6	10
Percent of students eligible for free or reduced-price lunch[5]								
Less than 35 percent	52	52	98	96	79	82	6	6
35 to 49 percent	50	54	94	95	77	75	4	5!
50 to 74 percent	50	50	91	97	73	71	8	5
75 percent or more	49	56	95	95	61	57	3	10

!Interpret data with caution; the coefficient of variation is greater than 50 percent.

[1]Percentages are based on the 99 percent of public schools with Internet access.

[2]Percentages are based on 50 percent of public schools (99 percent with Internet access times 51 percent allowing students to access the Internet outside of regular school hours) in 2001, and on 52 percent of public schools (99 percent with Internet access times 53 percent allowing students access to the Internet outside of regular school hours) in 2002.

[3]Data for combined schools are included in the totals and in analyses by other school characteristics but are not shown separately.

[4]Percent minority enrollment was not available for 31 schools in 2001. In 2002, this information was missing for 15 schools. The weighted response rate was 98.6 percent.

[5]Percent of students eligible for free or reduced-price lunch was not available for 2 schools in 2001.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; and "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

Table 8a. Standard errors of the percent of public schools allowing students to access the Internet outside of regular school hours, by school characteristics: 2001–02

School characteristic	Internet available to students outside of regular school hours		Time of availability					
			After school		Before school		On weekends	
	2001	2002	2001	2002	2001	2002	2001	2002
All public schools	1.8	1.8	1.1	1.1	2.1	1.8	1.1	1.0
Instructional level								
Elementary	2.4	2.2	1.6	1.7	3.2	2.6	1.4	1.4
Secondary	2.1	2.1	1.0	0.9	2.2	2.4	1.5	1.3
School size								
Less than 300	4.2	4.7	3.4	3.2	5.9	5.2	3.6	3.0
300 to 999	2.3	1.9	1.4	1.2	2.8	2.7	1.0	1.1
1,000 or more	2.9	2.7	1.4	1.4	2.7	2.8	1.7	2.1
Locale								
City	4.0	3.7	2.7	1.3	4.1	4.8	1.5	2.5
Urban fringe	2.7	2.9	2.1	1.5	3.1	3.8	1.5	1.8
Town	5.5	4.7	2.5	2.3	5.6	4.7	1.4	3.4
Rural	3.4	3.6	1.8	3.0	3.8	3.5	2.3	1.9
Percent minority enrollment								
Less than 6 percent	4.0	4.4	2.2	2.2	3.6	3.9	2.2	2.4
6 to 20 percent	3.7	3.8	2.1	2.5	5.3	3.2	3.5	1.0
21 to 49 percent	4.2	4.1	2.5	2.6	6.0	4.1	1.2	2.2
50 percent or more	3.4	3.3	1.7	1.6	3.9	3.9	1.4	2.4
Percent of students eligible for free or reduced-price lunch								
Less than 35 percent	2.3	2.6	1.3	2.2	3.4	3.2	1.7	1.5
35 to 49 percent	4.3	4.4	2.5	3.0	5.5	5.1	1.9	3.1
50 to 74 percent	4.0	4.6	3.3	1.5	4.7	4.1	3.2	1.9
75 percent or more	4.7	4.1	2.9	2.6	5.6	4.5	1.5	2.8

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; and "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

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Table 9. Average number of computers with Internet access regularly available to students outside of regular school hours, by school characteristics: 2001–02

School characteristic	2001	2002
All public schools	44	49
Instructional level[1]		
Elementary	39	46
Secondary	52	55
School size		
Less than 300	26	30
300 to 999	43	47
1,000 or more	70	82
Locale		
City	53	51
Urban fringe	51	52
Town	41	57
Rural	34	40
Percent minority enrollment[2]		
Less than 6 percent	39	49
6 to 20 percent	45	51
21 to 49 percent	44	44
50 percent or more	49	50
Percent of students eligible for free or reduced-price lunch[3]		
Less than 35 percent	46	50
35 to 49 percent	38	60
50 to 74 percent	44	39
75 percent or more	43	46

[1]Data for combined schools are included in the totals and in analyses by other school characteristics but are not shown separately.

[2]Percent minority enrollment was not available for 31 schools in 2001. In 2002, this information was missing for 15 schools. The weighted response rate was 98.6 percent.

[3]Percent of students eligible for free or reduced-price lunch was not available for 2 schools in 2001.

NOTE: Percentages are based on 50 percent of public schools (99 percent with Internet access times 51 percent allowing students to access the Internet outside of regular school hours) in 2001, and on 52 percent of public schools (99 percent with Internet access times 53 percent allowing students to access the Internet outside of regular school hours) in 2002.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; and "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

Table 9a. Standard errors of the average number of computers with Internet access regularly available to students outside of regular school hours, by school characteristics: 2001–02

School characteristic	2001	2002
All public schools	2.4	3.0
Instructional level		
Elementary	3.2	4.2
Secondary	3.1	3.3
School size		
Less than 300	2.9	4.9
300 to 999	3.2	4.1
1,000 or more	6.9	8.4
Locale		
City	8.2	5.9
Urban fringe	4.1	4.5
Town	3.1	18.1
Rural	2.7	3.9
Percent minority enrollment		
Less than 6 percent	3.0	9.0
6 to 20 percent	4.6	4.9
21 to 49 percent	4.6	4.0
50 percent or more	6.2	5.6
Percent of students eligible for free or reduced-price lunch		
Less than 35 percent	3.2	3.8
35 to 49 percent	4.4	14.5
50 to 74 percent	5.9	3.4
75 percent or more	6.1	6.8

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; and "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

Table 10. Percent of public schools providing hand-held computers to students or teachers for instructional purposes, by school characteristics: 2002

School characteristic	Provide hand-held computers to students or teachers
All public schools	7
Instructional level[1]	
Elementary	6
Secondary	10
School size	
Less than 300	8
300 to 999	6
1,000 or more	12
Locale	
City	5
Urban fringe	6
Town	6
Rural	10
Percent minority enrollment[2]	
Less than 6 percent	9
6 to 20 percent	7
21 to 49 percent	5
50 percent or more	7
Percent of students eligible for free or reduced-price lunch	
Less than 35 percent	9
35 to 49 percent	5
50 to 74 percent	7
75 percent or more	5

[1]Data for combined schools are included in the totals and in analyses by other school characteristics but are not shown separately.

[2]Percent minority enrollment was not available for 15 schools. The weighted response rate was 98.6 percent.

NOTE: Percentages are based on all public schools.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

Table 10a. Standard errors of the percent of public schools providing hand-held computers to students or teachers for instructional purposes, by school characteristics: 2002

School characteristic	Provide hand-held computers to students or teachers
All public schools	0.8
Instructional level	
Elementary	1.1
Secondary	1.5
School size	
Less than 300	2.4
300 to 999	1.0
1,000 or more	2.4
Locale	
City	1.5
Urban fringe	1.3
Town	1.8
Rural	2.1
Percent minority enrollment	
Less than 6 percent	2.2
6 to 20 percent	1.5
21 to 49 percent	1.4
50 percent or more	1.7
Percent of students eligible for free or reduced-price lunch	
Less than 35 percent	1.4
35 to 49 percent	2.0
50 to 74 percent	1.9
75 percent or more	1.9

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

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Table 11. Percent of public schools lending laptop computers to students, by school characteristics: 2001–02

School characteristic	2001	2002
All public schools	10	8
Instructional level[1]		
Elementary	7	5
Secondary	18	18
School size		
Less than 300	15	9
300 to 999	7	7
1,000 or more	13	11
Locale		
City	6	6
Urban fringe	7	6
Town	13	11
Rural	14	11
Percent minority enrollment[2]		
Less than 6 percent	11	12
6 to 20 percent	9	8
21 to 49 percent	10	7
50 percent or more	9	5
Percent of students eligible for free or reduced-price lunch[3]		
Less than 35 percent	10	10
35 to 49 percent	9	10
50 to 74 percent	10	7
75 percent or more	10	3

[1]Data for combined schools are included in the totals and in analyses by other school characteristics but are not shown separately.

[2]Percent minority enrollment was not available for 31 schools in 2001. In 2002, this information was missing for 15 schools. The weighted response rate was 98.6 percent.

[3]Percent of students eligible for free or reduced-price lunch was not available for 2 schools in 2001.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; and "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

Table 11a. Standard errors of the percent of public schools lending laptop computers to students, by school characteristics: 2001–02

School characteristic	2001	2002
All public schools	1.0	1.0
Instructional level		
Elementary	1.1	1.0
Secondary	1.9	2.1
School size		
Less than 300	3.2	2.1
300 to 999	1.1	1.0
1,000 or more	1.9	2.3
Locale		
City	1.3	1.7
Urban fringe	1.4	1.5
Town	3.1	2.9
Rural	2.2	1.8
Percent minority enrollment		
Less than 6 percent	2.1	2.3
6 to 20 percent	2.4	1.6
21 to 49 percent	2.7	1.7
50 percent or more	1.8	1.1
Percent of students eligible for free or reduced-price lunch		
Less than 35 percent	1.4	1.7
35 to 49 percent	2.6	2.5
50 to 74 percent	2.7	1.8
75 percent or more	2.5	1.0

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; and "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

Table 12. Percent of public schools lending laptop computers to students for various maximum lengths of time: 2002

Maximum length of time of loan	Percent
Less than 1 week	59
1 week to less than 1 month	19
1 month to less than 3 months	‡
3 months to less than 6 months	‡
6 months to less than the entire school year	‡
The entire school year	16
Other[1]	2!

!Interpret data with caution; the coefficient of variation is greater than 50 percent.

‡Reporting standards not met.

[1]For example, more than one school year.

NOTE: Percentages are based on the 8 percent of schools lending laptop computers to students. Detail may not sum to totals because of rounding and not reporting where there are too few cases for a reliable estimate.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

Table 12a. Standard errors of the percent of public schools lending laptop computers to students for various maximum lengths of time: 2002

Maximum length of time of loan	Percent
Less than 1 week	4.4
1 week to less than 1 month	3.7
1 month to less than 3 months	‡
3 months to less than 6 months	‡
6 months to less than the entire school year	‡
The entire school year	3.4
Other	1.2

‡Reporting standards not met.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

Table 13. Percent of public schools without laptop computers available for loan in 2002–03 planning to make laptop computers available for students to borrow during the 2003–04 school year: 2002

School characteristic	Percent
All public schools	7
Instructional level[1]	
Elementary	7
Secondary	8
School size	
Less than 300	12
300 to 999	6
1,000 or more	6
Locale	
City	5
Urban fringe	6
Town	6
Rural	11
Percent minority enrollment[2]	
Less than 6 percent	12
6 to 20 percent	5
21 to 49 percent	4
50 percent or more	7
Percent of students eligible for free or reduced-price lunch	
Less than 35 percent	6
35 to 49 percent	9
50 to 74 percent	6
75 percent or more	10

[1]Data for combined schools are included in the totals and in analyses by other school characteristics but are not shown separately.

[2]Percent minority enrollment was not available for 15 schools. The weighted response rate was 98.6 percent.

NOTE: Percentages are based on the 92 percent of public schools without laptops available for loan in 200[illegible]

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey S[illegible]m, "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

Table 13a. Standard errors of the percent of public schools without laptop computers available for loan in 2002–03 planning to make laptop computers available for students to borrow during the 2003–04 school year: 2002

School characteristic	Percent
All public schools	1.1
Instructional level	
Elementary	1.3
Secondary	1.6
School size	
Less than 300	3.0
300 to 999	1.0
1,000 or more	1.7
Locale	
City	1.5
Urban fringe	1.6
Town	2.4
Rural	2.4
Percent minority enrollment	
Less than 6 percent	3.2
6 to 20 percent	2.1
21 to 49 percent	1.7
50 percent or more	1.6
Percent of students eligible for free or reduced-price lunch	
Less than 35 percent	1.8
35 to 49 percent	3.4
50 to 74 percent	1.9
75 percent or more	2.7

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

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Table 14. Percent of public schools with a web site or a web page, by school characteristics: 2001–02

School characteristic	2001	2002
All public schools	75	86
Instructional level[1]		
Elementary	73	85
Secondary	83	93
School size		
Less than 300	63	84
300 to 999	78	86
1,000 or more	87	94
Locale		
City	73	76
Urban fringe	79	91
Town	80	84
Rural	70	91
Percent minority enrollment[2]		
Less than 6 percent	78	92
6 to 20 percent	80	87
21 to 49 percent	78	91
50 percent or more	65	76
Percent of students eligible for free or reduced-price lunch[3]		
Less than 35 percent	83	94
35 to 49 percent	77	89
50 to 74 percent	71	86
75 percent or more	59	66

[1]Data for combined schools are included in the totals and in analyses by other school characteristics but are not shown separately.

[2]Percent minority enrollment was not available for 31 schools in 2001. In 2002, this information was missing for 15 schools. The weighted response rate was 98.6 percent.

[3]Percent of students eligible for free or reduced-price lunch was not available for 2 schools in 2001.

NOTE: Percentages are based on the 99 percent of public schools with Internet access. In 2001, the questionnaire asked about the school's "web site." In 2002, the wording was changed to "web site or web page."

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; and "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

Table 14a. Standard errors of the percent of public schools with a web site or a web page, by school characteristics: 2001–02

School characteristic	2001	2002
All public schools	1.6	1.1
Instructional level		
Elementary	1.9	1.4
Secondary	2.1	1.6
School size		
Less than 300	4.6	2.9
300 to 999	1.5	1.3
1,000 or more	2.5	1.7
Locale		
City	3.2	2.8
Urban fringe	2.2	1.6
Town	4.3	3.9
Rural	3.3	2.1
Percent minority enrollment		
Less than 6 percent	3.3	2.0
6 to 20 percent	3.2	2.8
21 to 49 percent	3.8	2.2
50 percent or more	3.0	2.5
Percent of students eligible for free or reduced-price lunch		
Less than 35 percent	2.4	1.3
35 to 49 percent	4.0	3.6
50 to 74 percent	4.3	2.2
75 percent or more	3.8	3.3

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001, and "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

Table 15. Percentage distribution of public schools updating their web site or web page daily, weekly, monthly, or less than monthly, by school characteristics: 2001–02

School characteristic	Daily		Weekly		Monthly		Less than monthly	
	2001	2002	2001	2002	2001	2002	2001	2002
All public schools	8	12	23	30	31	27	37	32
Instructional level[1]								
Elementary	5	9	20	27	35	29	40	35
Secondary	18	21	34	38	22	20	26	22
School size								
Less than 300	6	15	14	23	32	22	47	40
300 to 999	7	8	25	32	33	29	36	31
1,000 or more	21	24	33	30	22	25	24	21
Locale								
City	8	11	18	25	35	20	39	43
Urban fringe	7	9	24	34	31	28	38	29
Town	10	12	29	34	21	23	40	31
Rural	9	15	25	26	34	30	32	28
Percent minority enrollment[2]								
Less than 6 percent	12	13	30	35	25	25	33	26
6 to 20 percent	7	14	25	36	35	28	34	22
21 to 49 percent	10	13	20	29	36	28	34	30
50 percent or more	5	6	16	18	32	26	47	49
Percent of students eligible for free or reduced-price lunch[3]								
Less than 35 percent	11	14	29	37	32	27	28	22
35 to 49 percent	7	14	23	29	29	27	42	31
50 to 74 percent	7	10	21	24	31	25	41	41
75 percent or more	4!	5	10	16	32	27	54	51

!Interpret data with caution; the coefficient of variation is greater than 50 percent.

[1]Data for combined schools are included in the totals and in analyses by other school characteristics but are not shown separately.

[2]Percent minority enrollment was not available for 31 schools in 2001. In 2002, this information was missing for 15 schools. The weighted response rate was 98.6 percent.

[3]Percent of students eligible for free or reduced-price lunch was not available for 2 schools in 2001.

NOTE: Percentages are based on 74 percent of public schools (99 percent with Internet access times 75 percent with a web site or web page) in 2001, and on 85 percent of public schools (99 percent with Internet access times 86 percent with a web site or web page) in 2002. Detail may not sum to totals because of rounding. In 2001, the questionnaire asked about the school's "Web site." In 2002, the wording was changed to "web site or web page."

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; and "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

Table 15a. Standard errors of the percentage distribution of public schools updating their web site or web page daily, weekly, monthly, or less than monthly, by school characteristics: 2001–02

School characteristic	Daily		Weekly		Monthly		Less than monthly	
	2001	2002	2001	2002	2001	2002	2001	2002
All public schools	1.0	1.2	1.7	1.8	2.1	1.5	2.0	2.0
Instructional level								
Elementary	1.2	1.4	2.1	2.3	2.5	2.1	2.5	2.4
Secondary	1.9	2.1	2.5	2.2	2.5	1.8	2.4	2.4
School size								
Less than 300	2.1	3.5	3.7	4.3	5.5	3.7	5.9	4.6
300 to 999	1.2	1.4	2.0	2.1	2.3	1.8	2.1	2.1
1,000 or more	3.1	3.4	3.5	3.2	3.1	2.7	3.4	3.0
Locale								
City	1.9	2.5	2.6	3.2	3.5	3.4	4.1	4.1
Urban fringe	1.6	1.5	2.9	2.8	3.1	2.5	3.9	2.9
Town	3.4	3.7	3.8	4.9	4.8	5.1	5.9	5.7
Rural	1.7	2.3	3.5	3.3	4.4	3.1	4.0	3.3
Percent minority enrollment								
Less than 6 percent	2.3	2.5	4.1	4.2	4.3	3.8	4.9	3.7
6 to 20 percent	1.8	2.6	3.3	3.5	3.7	3.6	4.3	3.4
21 to 49 percent	2.4	2.9	2.7	4.1	3.8	3.8	4.2	3.6
50 percent or more	1.5	1.5	2.7	2.2	4.0	3.5	3.8	3.7
Percent of students eligible for free or reduced-price lunch								
Less than 35 percent	1.5	1.9	2.7	2.7	3.1	2.4	3.0	2.8
35 to 49 percent	1.9	3.6	3.9	4.7	4.7	4.0	4.8	4.7
50 to 74 percent	2.3	1.9	2.9	3.2	4.8	3.3	4.2	3.7
75 percent or more	1.9	2.0	2.9	3.2	5.3	4.7	5.1	5.7

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; and "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

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Table 16. Percentage distribution of types of staff or students who were primarily responsible for the school's web site or web page support, by school characteristics: 2002

School characteristic	Teacher or other staff as part of formal responsibilities	Full-time, paid school technology director/ coordinator	Teacher or other staff as volunteers	District staff	Part-time, paid school technology director/ coordinator	Other	Students	Consultant/ outside contractor
All public schools	29	22	18	18	5	4	2	2
Instructional level[1]								
Elementary	28	21	18	20	5	5	1	2
Secondary	35	23	17	13	5	1!	4	2
School size								
Less than 300	26	18	23	17	8	5	2!	‡
300 to 999	29	23	16	19	5	5	2	2
1,000 or more	39	23	19	11	3	2!	2	2
Locale								
City	32	19	20	16	5	4	3	2!
Urban fringe	31	18	15	19	4	8	‡	3
Town	26	28	22	19	2!	#	‡	‡
Rural	28	22	19	16	8	2	4	2
Percent minority enrollment[2]								
Less than 6 percent	25	24	17	20	7	‡	3	3!
6 to 20 percent	28	20	21	17	6	4	3	1!
21 to 49 percent	36	19	19	13	6	4	1!	1!
50 percent or more	29	22	16	21	1	7	1!	2!
Percent of students eligible for free or reduced-price lunch								
Less than 35 percent	30	22	16	16	6	6	1	3
35 to 49 percent	27	21	22	16	8	‡	4	‡
50 to 74 percent	29	19	20	20	4	4	2	1!
75 percent or more	29	27	17	20	1!	3!	‡	3!

#Rounds to zero.

!Interpret data with caution; the coefficient of variation is greater than 50 percent.

‡Reporting standards not met.

[1]Data for combined schools are included in the totals and in analyses by other school characteristics but are not shown separately.

[2]Percent minority enrollment was not available for 15 schools. The weighted response rate was 98.6 percent.

NOTE: Percentages are based on 85 percent of public schools (99 percent with Internet access times 86 percent with a web site or web page). Detail may not sum to totals because of rounding and not reporting where there are too few cases for a reliable estimate.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

Table 16a. Standard errors of the percentage distribution of types of staff or students who were primarily responsible for the school's web site or web page support, by school characteristics: 2002

School characteristic	Teacher or other staff as part of formal responsibilities	Full-time, paid school technology director/ coordinator	Teacher or other staff as volunteers	District staff	Part-time, paid school technology director/ coordinator	Other	Students	Consultant/ outside contractor
All public schools	1.8	1.8	1.5	1.3	0.9	0.9	0.5	0.6
Instructional level								
Elementary	2.4	2.1	1.8	1.7	1.2	1.2	0.6	0.8
Secondary	2.3	2.6	1.9	1.7	1.1	0.6	1.1	0.7
School size								
Less than 300	4.2	3.6	3.8	3.7	2.7	2.1	1.3	‡
300 to 999	2.1	1.9	1.9	1.7	1.0	0.9	0.6	0.8
1,000 or more	3.2	2.9	3.0	2.2	1.2	1.2	0.9	0.7
Locale								
City	4.1	2.6	2.8	2.9	1.8	2.0	1.2	1.4
Urban fringe	2.7	2.7	2.1	2.1	1.4	2.1	‡	1.3
Town	3.8	5.4	5.3	4.6	1.3	†	‡	‡
Rural	3.4	3.1	3.0	2.6	2.1	0.8	1.2	0.7
Percent minority enrollment								
Less than 6 percent	3.2	4.0	2.9	3.7	2.3	‡	1.2	1.3
6 to 20 percent	3.6	3.3	3.5	3.5	2.0	2.0	1.1	0.8
21 to 49 percent	4.2	3.2	2.9	2.7	2.0	1.9	0.7	1.0
50 percent or more	3.0	2.5	2.3	3.2	0.5	2.4	0.7	1.2
Percent of students eligible for free or reduced-price lunch								
Less than 35 percent	2.4	2.8	2.2	2.4	1.5	1.6	0.6	1.0
35 to 49 percent	4.1	3.6	4.0	3.4	3.2	‡	2.2	‡
50 to 74 percent	3.5	3.0	3.1	3.0	1.8	1.7	1.0	0.6
75 percent or more	4.9	4.4	3.4	4.0	0.7	1.6	‡	2.0

†Estimate of standard error is not derived because it is based on an estimate of 0 percent.

‡Reporting standards not met.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

Table 17. Percent of public schools using technologies or procedures to prevent student access to inappropriate material on the Internet, and of those schools, percent using these measures on all computers with Internet access used by students, by school characteristics: 2001–02

School characteristic	Use technologies/procedures to prevent student access to inappropriate material on the Internet[1]		Use these measures on all computers with Internet access used by students[2]	
	2001	2002	2001	2002
All public schools	96	99	98	99
Instructional level[3]				
Elementary	96	99	98	99
Secondary	97	100[4]	98	99
School size				
Less than 300	94	99	96	100[4]
300 to 999	97	100[4]	99	99
1,000 or more	98	99	98	99
Locale				
City	93	99	98	99
Urban fringe	98	99	98	98
Town	96	100	100[4]	99
Rural	97	100[4]	98	100[4]
Percent minority enrollment[5]				
Less than 6 percent	96	99	97	100[4]
6 to 20 percent	98	99	100[4]	100[4]
21 to 49 percent	97	100	99	98
50 percent or more	95	99	98	98
Percent of students eligible for free or reduced-price lunch[6]				
Less than 35 percent	99	100[4]	99	99
35 to 49 percent	93	100[4]	97	100[4]
50 to 74 percent	98	99	97	98
75 percent or more	92	98	98	99

[1]Percentages are based on the 99 percent of public schools with Internet access.

[2]Percentages are based on 95 percent of public schools (99 percent with Internet access times 96 percent using technologies or procedures to prevent student access to inappropriate material on the Internet) in 2001, and on 98 percent (99 percent with Internet access times 99 percent using technologies or procedures to prevent student access to inappropriate material on the Internet) in 2002.

[3]Data for combined schools are included in the totals and in analyses by other school characteristics but are not shown separately.

[4]In this case, the estimate fell between 99.5 percent and 100 percent and therefore was rounded to 100 percent.

[5]Percent minority enrollment was not available for 31 schools in 2001. In 2002, this information was missing for 15 schools. The weighted response rate was 98.6 percent.

[6]Percent of students eligible for free or reduced-price lunch was not available for 2 schools in 2001.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; and "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

Table 17a. Standard errors of the percent of public schools using technologies or procedures to prevent student access to inappropriate material on the Internet, and of those schools, standard errors of the percent using these measures on all computers with Internet access used by students, by school characteristics: 2001–02

School characteristic	Use technologies/procedures to prevent student access to inappropriate material on the Internet[1]		Use these measures on all computers with Internet access used by students[2]	
	2001	2002	2001	2002
All public schools	0.6	0.3	0.5	0.3
Instructional level				
Elementary	0.7	0.4	0.7	0.4
Secondary	0.9	0.2	0.6	0.5
School size				
Less than 300	2.1	0.9	1.8	0.4
300 to 999	0.6	0.3	0.4	0.5
1,000 or more	0.9	0.8	0.7	0.4
Locale				
City	1.5	0.5	0.8	0.7
Urban fringe	1.0	0.6	1.0	0.9
Town	2.4	†	0.3	0.6
Rural	1.1	0.5	1.1	0.3
Percent minority enrollment				
Less than 6 percent	1.6	0.7	1.6	0.4
6 to 20 percent	1.4	0.6	0.3	0.1
21 to 49 percent	1.5	†	0.7	1.1
50 percent or more	1.1	0.5	0.9	0.7
Percent of students eligible for free or reduced-price lunch				
Less than 35 percent	0.7	0.3	0.6	0.5
35 to 49 percent	2.4	0.2	1.8	0.3
50 to 74 percent	1.1	0.7	1.5	0.8
75 percent or more	1.8	1.1	1.0	0.8

†Estimate of standard error is not derived because it is based on an estimate of 100 percent.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; and "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

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Table 18. Percent of public schools with Internet access using various technologies or procedures to prevent student access to inappropriate material on the Internet, by school characteristics: 2001–02

School characteristic	Monitoring by teachers or other staff		Blocking/ filtering software		Written contract that parents have to sign		Written contract that students have to sign		Monitoring software		Honor code for students		Intranet	
	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002
All public schools	91	91	87	96	80	82	75	77	46	52	44	41	26	32
Instructional level[1]														
Elementary	90	91	85	95	78	82	72	74	43	51	44	41	24	34
Secondary	93	92	93	98	87	82	87	84	52	57	45	43	33	28
School size														
Less than 300	88	90	81	97	73	82	69	78	42	51	38	40	17	19
300 to 999	92	91	88	95	82	82	76	75	47	52	46	42	29	37
1,000 or more	93	95	93	99	86	81	84	81	48	59	46	43	32	33
Locale														
City	90	88	83	91	78	78	72	74	49	45	51	38	29	38
Urban fringe	91	92	88	96	80	79	76	69	44	53	43	44	29	37
Town	84	93	87	99	79	84	76	85	37	65	39	40	19	24
Rural	95	91	87	98	82	87	78	83	49	51	42	42	24	26
Percent minority enrollment[2]														
Less than 6 percent	92	92	86	96	82	83	77	81	47	51	41	39	21	20
6 to 20 percent	93	92	86	96	80	82	75	73	44	57	45	41	30	37
21 to 49 percent	91	94	86	96	79	83	77	77	46	53	46	50	29	41
50 percent or more	88	87	87	95	78	80	72	75	45	48	44	39	27	35
Percent of students eligible for free or reduced-price lunch[3]														
Less than 35 percent	92	95	87	95	82	82	77	75	45	54	48	44	29	34
35 to 49 percent	94	89	86	98	83	86	78	80	40	47	38	42	23	28
50 to 74 percent	90	90	86	97	81	83	79	81	51	53	40	40	22	30
75 percent or more	87	86	86	95	73	76	64	71	46	52	45	37	28	35

[1]Data for combined schools are included in the totals and in analyses by other school characteristics but are not shown separately.

[2]Percent minority enrollment was not available for 31 schools in 2001. In 2002, this information was missing for 15 schools. The weighted response rate was 98.6 percent.

[3]Percent of students eligible for free or reduced-price lunch was not available for 2 schools in 2001.

NOTE: Percentages are based on 95 percent of public schools (99 percent with Internet access times 96 percent using technologies/procedures to prevent student access to inappropriate material on the Internet) in 2001, and 98 percent of public schools (99 percent with Internet access times 99 percent using technologies/procedures to prevent student access to inappropriate material on the Internet) in 2002.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; and "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

Table 18a. Standard errors of the percent of public schools with Internet access using various technologies or procedures to prevent student access to inappropriate material on the Internet, by school characteristics: 2001–02

School characteristic	Monitoring by teachers or other staff		Blocking/ filtering software		Written contract that parents have to sign		Written contract that students have to sign		Monitoring software		Honor code for students		Intranet	
	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002
All public schools	1.1	1.2	1.4	0.7	1.4	1.3	1.4	1.5	1.9	1.8	1.8	1.8	1.6	1.9
Instructional level														
Elementary	1.4	1.5	1.8	0.9	1.8	1.7	1.7	1.9	2.4	2.0	2.3	2.1	1.9	2.4
Secondary	1.3	1.4	1.4	0.6	1.7	1.8	1.6	1.8	2.6	2.7	2.6	2.8	2.9	1.6
School size														
Less than 300	3.2	2.9	3.7	1.8	4.0	3.6	4.0	3.9	4.4	4.8	4.2	4.6	3.7	3.6
300 to 999	1.2	1.2	1.5	0.8	1.7	1.5	1.7	1.7	2.2	2.0	2.0	1.8	1.9	2.1
1,000 or more	1.5	1.7	1.9	0.5	2.5	3.1	2.7	2.9	3.4	3.5	3.3	3.7	3.3	3.4
Locale														
City	2.6	2.2	3.3	2.6	3.1	3.0	3.1	2.7	3.9	3.7	3.8	2.9	3.2	4.3
Urban fringe	1.9	1.7	2.4	1.2	3.0	2.6	2.7	3.0	3.2	3.1	3.3	3.0	3.0	2.8
Town	4.4	2.1	3.6	0.6	4.4	3.7	4.7	3.3	5.1	4.4	5.0	5.1	4.0	4.5
Rural	1.8	2.2	3.0	1.0	2.7	2.4	3.0	2.9	3.3	3.6	3.5	3.6	2.8	3.4
Percent minority enrollment														
Less than 6 percent	2.2	2.7	2.6	1.7	3.1	3.1	3.5	3.1	3.8	3.9	3.7	4.2	3.6	3.3
6 to 20 percent	2.1	1.9	2.8	1.3	3.1	2.5	3.5	3.0	4.0	3.2	3.5	3.7	3.0	3.3
21 to 49 percent	2.5	2.0	3.2	1.8	4.0	3.4	4.1	3.1	4.5	3.7	3.9	3.7	3.6	3.9
50 percent or more	2.2	2.0	2.4	1.3	2.6	2.5	2.9	2.8	3.4	3.0	4.0	2.8	3.2	2.9
Percent of students eligible for free or reduced-price lunch														
Less than 35 percent	1.7	1.3	2.2	1.4	2.3	2.0	2.4	2.4	2.9	2.7	2.8	2.9	2.9	2.8
35 to 49 percent	2.4	2.9	2.9	1.3	3.7	3.7	4.0	4.3	4.2	4.5	3.9	4.4	3.5	3.8
50 to 74 percent	2.6	2.3	3.1	1.6	3.6	3.2	3.9	3.3	4.3	3.7	4.1	3.5	3.4	3.3
75 percent or more	2.9	3.0	2.9	1.7	3.9	3.0	4.5	3.5	3.9	3.4	4.5	3.6	4.1	3.4

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; and "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

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Table 19. Percent of public schools with Internet access using various methods to disseminate information to students and parents about the technologies or other procedures used to prevent student access to inappropriate material on the Internet at the school, by school characteristics: 2002

School characteristic	Part of school policy/rules distributed to students and parents	Special notice to parents	Newsletters	Posted message on the school web site or web page	Notice on bulletin board at school	Pop-up message at computer or Internet log on	Other
All public schools	90	64	57	32	24	15	5
Instructional level[1]							
Elementary	89	65	58	32	23	13	5
Secondary	93	60	57	32	30	19	8
School size							
Less than 300	91	64	59	24	26	8	8
300 to 999	90	65	57	33	22	17	4
1,000 or more	93	64	59	39	28	19	7
Locale							
City	87	68	56	29	25	16	8
Urban fringe	87	60	59	38	24	16	4
Town	91	65	58	32	26	11	3!
Rural	95	66	56	27	23	14	6
Percent minority enrollment[2]							
Less than 6 percent	91	59	62	31	26	11	3
6 to 20 percent	94	68	58	33	21	14	7
21 to 49 percent	91	65	58	32	23	12	7
50 percent or more	85	66	53	29	25	21	5
Percent of students eligible for free or reduced-price lunch							
Less than 35 percent	91	64	61	36	24	14	6
35 to 49 percent	90	63	61	32	21	9	6
50 to 74 percent	93	69	52	29	24	14	3
75 percent or more	85	60	52	24	28	23	6

!Interpret data with caution; the coefficient of variation is greater than 50 percent.

[1]Data for combined schools are included in the totals and in analyses by other school characteristics but are not shown separately.

[2]Percent minority enrollment was not available for 15 schools. The weighted response rate was 98.6 percent.

NOTE: Percentages are based on 98 percent of public schools (99 percent with Internet access times 99 percent using technologies or procedures to prevent student access to inappropriate material on the Internet).

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

Table 19a. Standard errors of the percent of public schools with Internet access using various methods to disseminate information to students and parents about the technologies or other procedures used to prevent student access to inappropriate material on the Internet at the school, by school characteristics: 2002

School characteristic	Part of school policy/rules distributed to students and parents	Special notice to parents	Newsletters	Posted message on the school web site or web page	Notice on bulletin board at school	Pop-up message at computer or Internet log on	Other
All public schools	1.3	1.9	2.1	1.7	1.8	1.3	0.8
Instructional level							
Elementary	1.6	2.2	2.5	2.3	2.1	1.6	1.0
Secondary	1.8	2.7	2.4	2.0	2.4	1.7	1.4
School size							
Less than 300	3.0	5.0	4.0	4.2	4.3	2.4	2.2
300 to 999	1.6	1.9	2.2	1.7	1.9	1.5	0.9
1,000 or more	2.0	3.1	3.4	3.9	3.2	2.7	1.9
Locale							
City	2.5	3.2	4.0	3.3	3.1	2.8	1.8
Urban fringe	2.2	2.8	3.5	3.0	3.2	1.9	1.3
Town	3.4	4.6	5.0	5.6	4.7	2.5	1.8
Rural	1.2	3.5	3.4	3.4	2.7	2.4	1.7
Percent minority enrollment							
Less than 6 percent	2.6	4.3	4.1	3.7	3.1	2.7	1.2
6 to 20 percent	1.8	3.5	4.0	3.6	3.1	2.2	2.1
21 to 49 percent	2.4	3.7	4.3	3.6	3.7	2.5	1.9
50 percent or more	2.5	2.8	3.0	2.6	2.7	2.5	1.2
Percent of students eligible for free or reduced-price lunch							
Less than 35 percent	1.7	3.1	3.4	2.5	2.7	1.8	1.5
35 to 49 percent	3.8	4.7	4.7	3.9	3.8	2.8	2.3
50 to 74 percent	1.9	3.7	4.3	3.3	3.1	2.5	1.1
75 percent or more	3.4	3.2	3.4	2.8	3.0	3.0	1.7

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

Table 20. Percent of public schools reporting that they or their district offered professional development for teachers in their school on how to integrate the Internet into the curriculum in the past 12 months, and percent of teachers in those schools who have attended such professional development in the past 12 months: 2002

School characteristic	School or district has offered professional development[1]	Percent of teachers who have attended professional development[2]				
		0 percent	1 to 25 percent	26 to 50 percent	51 to 75 percent	76 to 100 percent
All public schools	87	1	42	17	11	30
Instructional level[3]						
Elementary	87	1	43	15	10	31
Secondary	86	#	42	20	12	26
School size						
Less than 300	82	#	29	14	9	47
300 to 999	88	1	45	17	11	25
1,000 or more	93	‡	51	19	8	21
Locale						
City	90	!!	53	14	7	25
Urban fringe	90	‡	40	18	11	30
Town	82	‡	36	21	14	28
Rural	84	‡	38	15	12	34
Percent minority enrollment[4]						
Less than 6 percent	86	‡	30	16	13	40
6 to 20 percent	85	‡	43	18	12	26
21 to 49 percent	88	‡	46	17	9	27
50 percent or more	89	2!	49	16	7	27
Percent of students eligible for free or reduced-price lunch						
Less than 35 percent	90	‡	43	15	12	29
35 to 49 percent	82	‡	30	20	14	34
50 to 74 percent	85	‡	42	21	7	30
75 percent or more	88	‡	51	11	9	27

#Rounds to zero.

!Interpret data with caution; the coefficient of variation is greater than 50 percent.

‡Reporting standards not met.

[1]Percentages are based on the 99 percent of public schools with Internet access.

[2]Percentages are based on 86 percent of public schools (99 percent with Internet access times 87 percent reporting that they or their district offered professional development to teachers in the school on how to integrate Internet into the curriculum in the past 12 months). Detail may not sum to totals because of rounding and not reporting where there are too few cases for a reliable estimate.

[3]Data for combined schools are included in the totals and in analyses by other school characteristics but are not shown separately.

[4]Percent minority enrollment was not available for 15 schools. The weighted response rate was 98.6 percent.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

Table 20a. Standard errors of the percent of public schools reporting that they or their district offered professional development for teachers in their school on how to integrate the Internet into the curriculum in the past 12 months, and standard errors of the percent of teachers in those schools who have attended such professional development in the past 12 months: 2002

School characteristic	School or district has offered professional development	Percent of teachers who have attended professional development				
		0 percent	1 to 25 percent	26 to 50 percent	51 to 75 percent	76 to 100 percent
All public schools	1.4	0.4	1.5	1.4	1.1	1.7
Instructional level						
Elementary	1.6	0.5	1.9	1.8	1.5	2.2
Secondary	1.9	†	2.1	2.1	1.7	1.8
School size						
Less than 300	4.3	†	4.1	3.8	2.7	4.3
300 to 999	1.2	0.6	1.7	1.7	1.5	1.8
1,000 or more	2.1	‡	3.3	3.1	1.6	2.5
Locale						
City	2.2	0.9	3.6	2.8	1.4	3.4
Urban fringe	1.9	‡	3.4	2.4	2.0	3.0
Town	3.8	‡	4.5	4.8	4.5	6.1
Rural	2.8	‡	4.0	2.5	2.5	4.0
Percent minority enrollment						
Less than 6 percent	2.8	‡	4.0	3.2	2.9	4.6
6 to 20 percent	2.6	‡	3.5	2.7	2.6	3.1
21 to 49 percent	3.2	‡	4.8	3.0	2.5	3.3
50 percent or more	2.0	0.8	3.8	2.5	1.3	3.3
Percent of students eligible for free or reduced-price lunch						
Less than 35 percent	1.8	‡	3.0	2.3	1.9	2.8
35 to 49 percent	4.2	‡	4.9	4.2	3.7	5.7
50 to 74 percent	2.5	‡	3.8	3.2	2.0	4.4
75 percent or more	2.4	‡	3.9	2.4	2.3	3.8

†Estimate of standard error is not derived because it is based on an estimate of 0 percent.

‡Reporting standards not met.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

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Table 21. Standard errors for figures and for data not shown in tables: 2002

Item	Estimate	Standard error
Figure 1. Percent of public school instructional rooms with Internet access: 1994–2002		
1994	3	0.3
1995	8	0.7
1996	14	1.0
1997	27	1.6
1998	51	1.8
1999	64	1.6
2000	77	1.1
2001	87	0.9
2002	92	0.6
Figure 2. Percentage distribution of the staff position of those who were primarily responsible for computer hardware, software, and Internet support at the school: 2002		
Full-time, paid school technology director/coordinator	38	1.6
District staff	26	1.4
Teacher or other staff as part of formal responsibilities	18	1.3
Part-time, paid school technology directory/coordinator	11	1.1
Other	7	1.1
Figure 3. Ratio of public school students to instructional computers with Internet access: 1998–2002		
1998	12.1	0.6
1999	9.1	0.3
2000	6.6	0.1
2001	5.4	0.1
2002	4.8	0.1
Figure 4. Percentage distribution of types of staff and students who were primarily responsible for the school's web site or web page support: 2002		
Teacher or other staff as part of formal responsibilities	29	1.8
Full-time, paid school technology director/coordinator	22	1.8
Teacher or other staff as volunteers	18	1.5
District staff	18	1.3
Other	14	1.3
Section: Students and Computer Access		
Subsection: Provision of Hand-Held Computers		
Median number of hand-held computers provided[1]	9	3.4
Average number of hand-held computers provided[1]	22	4.6
Average number of hand-held computers provided (without 1,000)[1]	18	3.3
Subsection: Laptop Computer Loans		
Median number of laptop computers available for loan[2]	7	1.5
Ratio of students per laptop computer[2]	16.0	6.7
Ratio of students per laptop computer (without 2,700)[2]	19.9	10.7
Percent of schools without laptop computers available for loan in 2002	92	1.0
Section: School Web Sites		
Of the schools with a web site or web page, percent reporting that the web site or web page was updated at least monthly[3]	68	2.0

See notes at end of table.

Table 21. Standard errors for figures and for data not shown in tables: 2002—Continued

Item	Estimate	Standard error
Section: Technologies and Procedures to Prevent Student Access to Inappropriate Material on the Internet		
Percent of schools using more than one procedure or technology[4]	96	0.7

!Interpret data with caution; the coefficient of variation is greater than 50 percent.

[1]Estimate is based on the 7 percent of public schools providing hand-held computers to students or teachers for instructional purposes in 2002.

[2]Estimate is based on the 8 percent of public schools lending laptop computers to students in 2002.

[3]Estimate is based on the 86 percent of public schools having a web site or web page in 2002.

[4]Estimate is based on the 99 percent of public schools using various technologies or procedures to control student access to inappropriate material on the Internet.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Survey on Advanced Telecommunications in U.S. Public Schools, K–12," FRSS 51, 1994; "Survey on Advanced Telecommunications in U.S. Public Schools, K–12," FRSS 57, 1995; "Advanced Telecommunications in U.S. Public Schools, Fall 1996," FRSS 61, 1996; "Internet Access in U.S. Public Schools, Fall 1997," FRSS 64, 1997; "Internet Access in U.S. Public Schools, Fall 1998," FRSS 69, 1998; "Internet Access in U.S. Public Schools, Fall 1999," FRSS 75, 1999; "Internet Access in U.S. Public Schools, Fall 2000," FRSS 79, 2000; "Internet Access in U.S. Public Schools, Fall 2001," FRSS 82, 2001; and "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

Appendix A

Methodology and Technical Notes

Methodology and Technical Notes

The Fast Response Survey System (FRSS) was established in 1975 by the National Center for Education Statistics (NCES), U.S. Department of Education. FRSS is designed to collect small amounts of issue-oriented data with minimal burden on respondents and with a quick turnaround from data collection to reporting.

Sample Selection

The sample of elementary and secondary schools for the FRSS survey on Internet access in public schools was selected from the 2000–2001 NCES Common Core of Data (CCD) Public School Universe File, the most up-to-date file available at the time the sample was drawn. Over 96,600 schools are contained in the 2000–2001 CCD Public School Universe File. For this survey, regular elementary and secondary/combined schools were selected. Special education, vocational education, and alternative schools were excluded from the sampling frame, along with schools with a highest grade below first grade and those outside the 50 states and the District of Columbia. With these exclusions, the final sampling frame consisted of about 83,500 schools, of which about 62,500 were classified as elementary schools and about 21,000 as secondary/combined schools. [15]

A sample of 1,206 schools was selected from the public school frame. To select the sample, the frame of schools was stratified by instructional level (elementary, secondary/combined schools), enrollment size (less than 300 students, 300 to 999, 1,000 to 1,499, 1,500 or more), and percentage of students eligible for free or reduced-price lunch (less than 35 percent, 35 to 49 percent, 50 to 74 percent, 75 percent or more). Schools in the highest poverty category (schools with 75 percent or more students eligible for free or reduced-price lunch) were oversampled to permit analyses for that category.

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[15]During data collection, a number of sampled schools were found to be outside the scope of the survey, usually because they were closed or merged. This reduced the number of schools in the sampling frame to an estimated 82,036.

Respondents and Response Rates

The three-page survey instrument was designed by Westat and NCES. The questions included on the survey addressed access to the Internet in public schools and classrooms, the types of Internet connections used, student access to the Internet outside of regular school hours, laptop loans, hand-held computers for students and teachers, school web sites, teacher professional development on how to integrate the use of the Internet into the curriculum, and technologies and procedures used to prevent student access to inappropriate material on the Internet.

In early October 2002, questionnaires were mailed to the principals of the 1,206 sampled schools. The principal was asked to forward the questionnaire to the technology coordinator or person most knowledgeable about Internet access at the school. Telephone follow-up of nonrespondents was initiated later in October, and data collection was completed in December. The respondent information section on the front of the questionnaire indicated that the technology coordinator completed the questionnaire at 34 percent of the schools, the principal completed it at 31 percent of the schools, and other personnel completed it at 35 percent of the schools. Seventeen schools were outside the scope of the survey, and 1,095 schools completed the survey. Thus, the final response rate was 92 percent (1,095 of 1,189 eligible schools). The weighted response rate was 93 percent. With the exception of the question on the number of hand-held computers provided to teachers and students for instructional purposes (which had an item nonresponse rate of 9.4 percent), weighted item nonresponse rates ranged from 0 percent to 3.1 percent.

Imputation for Item Nonresponse

Although item nonresponse for key items was very low, missing data were imputed for the 14 items listed in table A-1. The missing items included both numerical data such as counts of instructional rooms and computers, as well as categorical data such as the provision of hand-held computers to students and teachers. The missing data were imputed using a "hot deck" approach to obtain a "donor" school from which the imputed values were derived. Under the hot deck approach, a donor school that matched selected characteristics of the school with missing data was identified. The matching characteristics included level, enrollment size class, type of locale, and total number of computers in the school. Once a donor was found, it was used to derive the imputed values for the school with missing data. For categorical items, the imputed value was simply the corresponding value from the donor school. For numerical items, an appropriate ratio (e.g., the proportion of instructional rooms with Internet access) was calculated for the donor school, and this ratio was applied to available data (e.g.,

reported number of instructional rooms) for the recipient school to obtain the corresponding imputed value. All missing items for a given school were imputed from the same donor.

Table A-1. Number of cases with imputed data in the study sample, and number of cases with imputed data the sample represents, by questionnaire items: 2002

Questionnaire item		Respondent sample	National estimate
3.	Number of instructional computers	2	98
5.	Number of computers with Internet access	1	35
6.	Number of instructional computers with Internet access	1	35
9.	Number of instructional rooms with Internet access	2	98
9a.	Use of wireless Internet connections	7	595
9ba.	Use of broadband wireless Internet connections	7	595
9bb.	Use of narrowband wireless Internet connections	7	595
9c.	Number of instructional rooms with wireless Internet connections	7	595
13b.	Use of newsletters to disseminate information to students and parents about the technologies or procedures used to prevent student access to inappropriate material on the Internet	1	37
16.	Number of computers with Internet access available outside of regular school hours	1	27
21.	Percentage of teachers who attended professional development on how to integrate the use of the Internet into the curriculum	2	220
26.	Plans to make laptops available for students to borrow during the 2003-2004 school year	3	425
28.	Provision of hand-held computers to students or teachers for instructional purposes	7	595
29.	Number of hand-held computers provided	7	595

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

Sampling and Nonsampling Errors

The survey responses were weighted to produce national estimates (table A-2). The weights were designed to adjust for the variable probabilities of selection and differential nonresponse. The findings in this report are based on the sample selected and, consequently, are subject to sampling variability. The standard error is the measure of the variability of estimates due to sampling. It indicates the variability of a sample estimate that would be obtained from all possible samples of a given design and size. Standard errors are used as a measure of the precision expected from a particular sample. If all possible samples were surveyed under similar conditions, intervals of 1.96 standard errors below to 1.96 standard errors above a particular statistic would include the true population parameter being estimated in about 95 percent of the samples. This is a 95 percent confidence interval. For example, the estimated percentage of public schools with a web site in 2002 is 86 percent, and the estimated standard error is 1.1 percent. The 95 percent confidence interval for the statistic extends from 86 – (1.1 times 1.96) to 86 +

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(1.1 times 1.96), or from 84 to 88 percent. The coefficient of variation ("c.v.," also referred to as the "relative standard error") expresses the standard error as a percentage of the quantity being estimated. The c.v. of an estimate (y) is defined as c.v. = (s.e./y) x 100. Throughout this report, for any coefficient of variation higher than 50 percent, the data are flagged with the note that they should be interpreted with caution, as the value of the estimate is very unstable.

Table A-2. Number and percent of responding public schools in the study sample, and estimated number and percent of public schools the sample represents, by school characteristics: 2002

School characteristic	Respondent sample		National estimate	
	Number	Percent	Number	Percent
All public schools	1,095	100	82,036	100
Instructional level				
Elementary	563	51	62,134	76
Secondary	485	44	17,608	21
School size				
Less than 300	161	15	21,429	26
300 to 999	656	60	51,876	63
1,000 or more	278	25	8,731	11
Locale				
City	273	25	18,550	23
Urban fringe	372	34	26,431	32
Town	148	14	10,774	13
Rural	302	28	26,280	32
Percent minority enrollment				
Less than 6 percent	249	23	22,399	27
6 to 20 percent	267	24	20,525	25
21 to 49 percent	223	20	16,358	20
50 percent or more	341	31	21,862	27
Percent of students eligible for free or reduced-price school lunch				
Less than 35 percent	483	44	34,989	43
35 to 49 percent	167	15	13,243	16
50 to 74 percent	236	22	19,040	23
75 percent or more	209	19	14,765	18

NOTE: Percent minority enrollment was not available for 15 schools. Forty-seven schools were combined schools and therefore are missing in the instructional level counts used here, but those cases were included in the totals and in analyses by other school characteristics. Details may not add to totals because of rounding or missing data.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Fast Response Survey System, "Internet Access in U.S. Public Schools, Fall 2002," FRSS 83, 2002.

Because the data from this survey were collected using a complex sampling design, the sampling errors of the estimates from this survey (e.g., estimates of proportions) are typically larger than would be expected based on a simple random sample. Not taking the complex sample design into account

can lead to an underestimation of the standard errors associated with such estimates. To generate accurate standard errors for the estimates in this report, standard errors were computed using a technique known as jackknife replication. As with any replication method, jackknife replication involves constructing a number of subsamples (replicates) from the full sample and computing the statistic of interest for each replicate. The mean square error of the replicate estimates around the full sample estimate provides an estimate of the variance of the statistic. To construct the replications, 50 stratified subsamples of the full sample were created and then dropped one at a time to define 50 jackknife replicates. A computer program (WesVar) was used to calculate the estimates of standard errors. WesVar is a stand-alone Windows application that computes sampling errors from complex samples for a wide variety of statistics (totals, percents, ratios, log-odds ratios, general functions of estimates in tables, linear regression parameters, and logistic regression parameters).

The test statistics used in the analysis were calculated using the jackknife variances and thus appropriately reflect the complex nature of the sample design. In particular, Bonferroni adjustments were made to control for multiple comparisons where appropriate. For example, for an "experiment-wise" comparison involving g pairwise comparisons, each difference was tested at the $0.05/g$ significance level to control for the fact that g differences were simultaneously tested. The Bonferroni adjustment was also used for previous FRSS Internet reports. The Bonferroni adjustment is appropriate to test for statistical significance when the analyses are mainly exploratory (as in this report) because it results in a more conservative critical value for judging statistical significance. This means that comparisons that would have been significant with a critical value of 1.96 may not be significant with the more conservative critical value. For example, the critical value for comparisons between any two of the four categories of poverty concentration is 2.64 rather than 1.96.

When comparing percentage or ratio estimates across a family of three or more ordered categories (e.g., categories defined by percent minority enrollment), regression analyses were used to test for trends rather than a series of paired comparisons. For proportions, the analyses involved fitting models in WesVar with the ordered categories as the independent variable and the (dichotomous) outcome of interest (e.g., whether or not the school made computers with Internet access available before school) as the dependent variable. For testing the overall significance, an analysis of variance (ANOVA) model was fitted by treating the categories of the independent variables as nominal categories. For the trend test, a simple linear regression model was used with the categories of the independent variable as an ordinal quantitative variable. In both cases, tests of significance were performed using an adjusted Wald F-test. The test is applicable to data collected through complex sample surveys and is analogous to F-tests in standard regression analysis. For estimated ratios, similar tests of overall significance and

linear trends were performed using procedures analogous to those described by Skinner, Holt, and Smith.[16] A test was considered significant if the *p*-value associated with the statistic was less than 0.05.

The survey estimates are also subject to nonsampling errors that can arise because of nonobservation (nonresponse or noncoverage) errors, errors of reporting, and errors made in collection of the data. These errors can sometimes bias the data. Nonsampling errors may include such problems as the difference in the respondents' interpretation of the meaning of the question; memory effects; misrecording of responses; incorrect editing, coding, or data entry; differences related to the particular time the survey was conducted; or errors in data preparation. While general sampling theory can be used in part to determine how to estimate the sampling variability of a statistic, nonsampling errors are not easy to measure and, for measurement purposes, usually require that an experiment be conducted as part of the data collection procedures or that data external to the study be used. To minimize the potential for nonsampling errors, the questionnaire on Internet access in public schools was pretested in 1994, and again each time it was substantially modified. The questionnaire was last pretested for the fall 2001 survey, since a few new topics were introduced in the survey. The pretesting was done with public school technology coordinators and other knowledgeable respondents like those who would complete the survey. During the design of the survey, an effort was made to check for consistency of interpretation of questions and to eliminate ambiguous items. The questionnaire and instructions were intensively reviewed by NCES.

Manual and machine editing of the questionnaire responses were conducted to check the data for accuracy and consistency. Cases with missing or inconsistent items were recontacted by telephone to resolve problems. Data were keyed with 100 percent verification.

Definitions of Terms Used in the Questionnaire

Types of Internet connections

T3/DS3—Dedicated digital transmission of data and voice at the speed of 45 MB per second; composed of 672 channels.

Fractional T3—One or more channels of a T3/DS3 line. Used for data and voice transmission at the speed of less than 45 MB per second.

T1/DS1—Dedicated digital transmission of data and voice at the speed of 1.5 MB per second; composed of 24 channels.

Fractional T1—One or more channels of a T1/DS1 line. Used for data and voice transmission at the speed of less than 1.5 MB per second.

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[16] C.J. Skinner, D. Holt, and T.M.F. Smith, *Analysis of Complex Surveys* (Chichester: John Wiley & Sons, 1989).

Cable modem—Dedicated transmission of data through cable TV wires at a speed of up to 2 MB per second.

DSL (Digital Subscriber Line—Refers collectively to ADSL, SDSL, HDSL, and SDSL. DSLs have a dedicated digital transmission speed of up to 32 MB per second.

ISDN (Integrated Services Digital Network)—Sends voice and data over digital telephone lines or normal telephone wires at the speed of up to 128 KB per second.

56 KB—Dedicated digital transmission of data at the speed of 56 KB per second.

Dial-up connection—Data transmission through a normal telephone line upon command, at the maximum speed of 56 KB per second (for example, AOL or Earthlink).

Types of technologies to prevent student access to inappropriate material on the Internet

Blocking software—Uses a list of web sites that are considered inappropriate and prevents access to those sites.

Filtering software—Blocks access to sites containing keywords, alone or in context with other keywords.

Monitoring software—Records e-mails, instant messages, chats, and the web sites visited.

Intranet—Controlled computer network similar to the Internet, but accessible only to those who have permission to use it. Intranet system managers can limit user access to Internet material.

Definitions of Analysis Variables

Instructional level—Schools were classified according to their grade span in the 2000–2001 Common Core of Data (CCD) School Universe File. Data for combined schools are included in the totals and in analyses by other school characteristics, but are not shown separately.

Elementary school—Had grade 6 or lower and no grade higher than grade 8.

Secondary school—Had no grade lower than grade 7 and had grade 7 or higher.

School size—Total enrollment of students based on the 2000–2001 CCD School Universe File.

Less than 300 students
300 to 999 students
1,000 or more students

Locale—Is defined in the 2000–2001 CCD School Universe File.

City—A central city of a Consolidated Metropolitan Statistical Area (CMSA) or Metropolitan Statistical Area (MSA).

Urban fringe—Any incorporated place, Census-designated place, or non-place territory within a CMSA or MSA of a large or mid-size city and defined as urban by the Census Bureau.

Town—An incorporated place or Census-designated place with a population greater than or equal to 2,500 and located outside a CMSA or MSA.

Rural—Any incorporated place, Census-designated place, or non-place territory designated as rural by the Census Bureau.

Percent minority enrollment—The percent of students enrolled in the school whose race or ethnicity is classified as one of the following: American Indian or Alaskan Native; Asian or Pacific Islander; Black, non-Hispanic; or Hispanic, based on data in the 2000–2001 CCD School Universe File.

Less than 6 percent
6 to 20 percent
21 to 49 percent
50 percent or more

Percent of students eligible for free or reduced-price school lunch—This was based on responses to question 27 on the survey questionnaire; if it was missing from the questionnaire (1.5 percent of all cases), it was obtained from the 2000–2001 CCD School Universe File. This item served as a measurement of the concentration of poverty at the school.

Less than 35 percent
35 to 49 percent
50 to 74 percent
75 percent or more

Geographic region—One of four regions used by the Bureau of Economic Analysis of the U.S. Department of Commerce, the National Assessment of Educational Progress, and the National Education Association. Obtained from the 2000–2001 CCD School Universe File.

Northeast—Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont.

Southeast—Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia.

Central—Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin.

West—Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oklahoma, Oregon, Texas, Utah, Washington, and Wyoming.

It is important to note that many of the school characteristics used for independent analysis may also be related to each other. For example, enrollment size and instructional level of schools are related, with secondary schools typically being larger than elementary schools. Similarly, poverty

It is important to note that many of the school characteristics used for independent analysis may also be related to each other. For example, enrollment size and instructional level of schools are related, with secondary schools typically being larger than elementary schools. Similarly, poverty concentration and minority enrollment are related, with schools with a higher minority enrollment also more likely to have a high concentration of poverty. Other relationships between analysis variables may exist. Because of the relatively small sample size used in this study, it is difficult to separate the independent effects of these variables. Their existence, however, should be considered in the interpretation of the data.

Survey Acknowledgments

The survey was performed under contract with Westat. Westat's Project Director was Laurie Lewis, and the survey manager was Anne Kleiner. Bernie Greene was the NCES Project Officer. Debbie Alexander directed the data collection efforts, assisted by Ratna Basavaraju and Anjali Pandit. Alla Belenky was the programmer, Carol Litman was the editor, and Sylvie Warren was responsible for formatting the report.

This report was reviewed by the following individuals:

Outside NCES

- John Bailey, Director, Office of Educational Technology, U.S. Department of Education
- Stephanie Cronen, American Institutes for Research
- Peirce Hammond, Mathematics and Science Initiative, U.S. Department of Education
- Lawrence Lanahan, American Institutes for Research
- Jenelle Leonard, Office of Elementary and Secondary Education, U.S. Department of Education
- Barbara Means, SRI International
- Ram Singh, National Center for Education Research, Institute of Education Sciences, U.S. Department of Education
- Bernadette Adams Yates, Policy and Program Studies, Office of the Under Secretary, U.S. Department of Education

Inside NCES

- William Hussar, Early Childhood, International, and Crosscutting Studies Division
- Edith McArthur, Early Childhood, International, and Crosscutting Studies Division
- Jeffrey Owings, Associate Commissioner, Elementary/Secondary and Libraries Studies Division
- Val Plisko, Associate Commissioner, Early Childhood, International, and Crosscutting Studies Division
- Marilyn Seastrom, Chief Statistician
- Lisa Ward, Assessment Division

For more information about the survey, contact Bernie Greene, Early Childhood, International, and Crosscutting Studies Division, National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education, 1990 K Street NW, Washington, DC 20006; e-mail: Bernard.Greene@ed.gov; telephone: (202) 502-7348.

Appendix B

Questionnaire

U.S. DEPARTMENT OF EDUCATION
NATIONAL CENTER FOR EDUCATION STATISTICS
WASHINGTON, D.C. 20006-5651

INTERNET ACCESS IN U.S. PUBLIC SCHOOLS, FALL 2002

FAST RESPONSE SURVEY SYSTEM

FORM APPROVED
O.M.B. NO.: 1850-0733
EXPIRATION DATE: 09/2005

This survey is authorized by law (P.L. 103-382). While you are not required to respond, your cooperation is needed to make the results of this survey comprehensive, accurate, and timely.

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IF ABOVE INFORMATION IS INCORRECT, PLEASE MAKE CORRECTIONS DIRECTLY ON LABEL.

Name of person completing form: _____ Telephone: _____

Title/position: _____

Best days and times to reach you (in case of questions): _____

E-mail:
_____

THANK YOU. PLEASE KEEP A COPY OF THIS SURVEY FOR YOUR RECORDS.

PLEASE RETURN COMPLETED FORM TO:	IF YOU HAVE ANY QUESTIONS, CONTACT:
WESTAT Attention: 7166.28 - Kleiner 1650 Research Boulevard Rockville, Maryland 20850	Anne Kleiner 800-937-8281, ext. 2710 Fax 800-254-0984 E-mail: annekleiner@westat.com

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information is 1850-0733. The time required to complete this information collection is estimated to average 20 minutes per response, including the time to review instructions, search existing data resources, gather the data needed, and complete and review the information collected. If you have any comments concerning the accuracy of the time estimate(s) or suggestions for improving this form, please write to: U.S. Department of Education, Washington, D.C. 20202-4651. If you have comments or concerns regarding the status of your individual submission of this form, write directly to: National Center for Education Statistics, 1990 K Street, N.W., Washington, D.C. 20006

FRSS Form No. 83, 10/2002

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1. What is the total number of **instructional rooms** in your school? *(Include all rooms used for any instructional purposes: classrooms, computer labs and other labs, library/media centers, art rooms, rooms used for vocational or special education, etc.)* _____ instructional rooms

2. How many **computers** are there in your school? *(Do **not** include laptop computers available for loan. Count **all** other computers, including those used by administrators, teachers, and students. If none, please enter "0" and skip to question 22.)* _____ computers

3. How many of the **computers** indicated in question 2 are used for **instructional** purposes? *(Do **not** include computers used only for administrative purposes. If none, please enter "0.")* _____ instructional computers

4. Does your school have access to the Internet?

   Yes..... 1 *(Continue with question 5.)* No..... 2 *(Skip to question 22.)*

5. How many **computers** in your school currently have **Internet** access? *(Do **not** include laptop computers available for loan. Include all other instructional and noninstructional computers. This number should not exceed the number reported in question 2. If none, please enter "0" and skip to question 22.)* _____ computers

6. How many of the **computers** with **Internet** access indicated in question 5 are used for **instructional** purposes? *(This number should not exceed the number reported in question 5. If none, please enter "0.")*
   _____ instructional computers

7. Who is **primarily** responsible for computer hardware/software and Internet support at your school? *(Circle only one.)*

   Full-time, paid school technology director/coordinator 1
   Part-time, paid school technology director/coordinator 2
   District staff 3
   Consultant/outside contractor 4
   Teacher or other staff as part of formal responsibilities 5
   Teacher or other staff as volunteers 6
   Other (*specify*) _____ 7

8. What type(s) of connection does your school use when connecting to the Internet? *(See **definition box** below. Circle one on each line.)*

	Yes	No
a. Broadband connection (e.g.,T3/DS3, fractional T3, T1/DS1, fractional T1, cable modem, and/or DSL).....	1	2
b. Narrowband connection (e.g., ISDN, 56KB, and/or dial-up connection).....	1	2

Definitions for question 8

T3/DS3 – dedicated digital transmission of data and voice at the speed of 45 MB per second; composed of 672 channels.

Fractional T3 – one or more channels of a T3/DS3 line; used for data and voice transmission at the speed of less than 45 MB per second.

T1/DS1 – dedicated digital transmission of data and voice at the speed of 1.5 MB per second; composed of 24 channels.

Fractional T1 – one or more channels of a T1/DS1 line; used for data and voice transmission at the speed of less than 1.5 MB per second.

Cable modem – dedicated transmission of data through cable TV wires at a speed of up to 2 MB per second.

DSL (Digital Subscriber Line) – refers collectively to ADSL, SDSL, HDSL, and VDSL. DSLs have a dedicated digital transmission speed of up to 32 MB per second.

ISDN (Integrated Services Digital Network) – sends voice and data over digital telephone lines or normal telephone wires at the speed of up to 128 KB per second.

56 KB – dedicated digital transmission of data at the speed of 56 KB per second.

Dial-up connection – data transmission through a normal telephone line upon command, at the maximum speed of 56 KB per second (for example, AOL or Earthlink).

9. How many **instructional rooms** have a computer with **Internet** access? *(This number should not exceed the number reported in question 1. If none, please enter "0.")* _____ instructional rooms

9a. Does your school use wireless connections when connecting to the Internet?

   Yes..... 1 *(Continue with question 9b.)* No..... 2 *(Skip to question 10.)*

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9b. What type(s) of wireless connections does your school use when connecting to the Internet?

	Yes	No
a. Broadband connections	1	2
b. Narrowband connections	1	2

9c. How many **instructional rooms** use **wireless connections** when connecting to the Internet? *(This number should not exceed the number reported in question 1. If none, please enter "0.")* _____ instructional rooms

10. Does your school use any **technology** or other **procedure** to prevent student access to inappropriate material on the Internet?

Yes..... 1 *(Continue with question 11.)* No..... 2 *(Skip to question 14.)*

11. What **technologies** or **procedures** does your school use to prevent student access to inappropriate material on the Internet? *(See **definition box** below. Circle one on each line.)*

	Yes	No
a. Blocking/filtering software	1	2
b. Monitoring software	1	2
c. Intranet	1	2
d. Monitoring by teachers or other staff	1	2
e. Written contract that parents have to sign	1	2
f. Written contract that students have to sign	1	2
g. Honor code for students	1	2
h. Other (*specify*) _____	1	2

Definitions for question 11

Blocking software – uses a list of Web sites that are considered inappropriate and prevents access to those sites.

Filtering software – blocks access to sites containing keywords alone or in context with other keywords.

Monitoring software – records e-mails, instant messages, chats, and Web sites visited.

Intranet – controlled computer network similar to the Internet, but accessible only to those who have permission to use it. Intranet system managers can limit user access to Internet material.

12. Does your school use these technologies or other procedures to prevent student access from inappropriate material on **all** computers with **Internet** access used by students?

Yes..... 1 No..... 2

13. What method(s) does your school use to disseminate information to students and parents about the technologies or other procedures used to prevent student access to inappropriate material on the Internet at your school? *(Circle one on each line.)*

	Yes	No
a. Notice on bulletin board at school	1	2
b. Newsletters	1	2
c. Special notice to parents	1	2
d. Part of school policy/rules distributed to students and parents	1	2
e. Pop-up message at computer or Internet log on	1	2
f. Posted message on the school Web site or Web page	1	2
g. Other (*specify*) _____	1	2

14. Does your school allow students access to its instructional computers with Internet access **outside of regular school hours?** *(Do **not** include laptop computers available for loan.)*

Yes..... 1 (*Continue with question 15.*) No..... 2 (*Skip to question 17.*)

15. When are instructional computers with Internet access available to students **outside of regular school hours**? *(Circle one on each line.)*

	Yes	No
a. Before school	1	2
b. After school	1	2
c. On weekends	1	2

16. How many instructional computers with Internet access are regularly available to students **outside of regular school hours**? *(Do **not** include laptop computers available for loan.)* _____ computers

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17. Does your school have a Web site or a Web page (e.g., on the district's Web site)?

Yes ..... 1 *(Continue with question 18.)* No ..... 2 *(Skip to question 20.)*

18. How often is the Web site or Web page updated? *(Circle only one.)*

Daily 1
Weekly 2
Monthly 3
Less than monthly 4

19. Who is **primarily** responsible for your school's Web site or Web page support? *(Circle only one.)*

Full-time, paid school technology director/coordinator 1
Part-time, paid school technology director/coordinator 2
District staff 3
Consultant/outside contractor 4
Teacher or other staff as part of formal responsibilities 5
Teacher or other staff as volunteers 6
Students 7
Other *(specify)* _____ 8

20. In the past 12 months, has your school or district offered professional development for teachers in your school on how to integrate the use of the Internet into the curriculum?

Yes ..... 1 *(Continue with question 21.)* No ..... 2 *(Skip to question 22.)*

21. In the past 12 months, what percentage of teachers in your school attended professional development on how to integrate the use of the Internet into the curriculum? *(Circle one.)*

0 percent 1
1 to 25 percent 2
26 to 50 percent 3
51 to 75 percent 4
76 to 100 percent 5

22. Does your school lend laptop computers to students?

Yes ..... 1 *(Continue with question 23.)* No ..... 2 *(Skip to question 26.)*

23. How many laptops are available for students to borrow? _____ laptops

24. What is the longest time for which a student may borrow a laptop? *(Circle only one.)*

Less than 1 week 1
1 week to less than 1 month 2
1 month to less than 3 months 3
3 months to less than 6 months 4
6 months to less than the entire school year 5
The entire school year 6
Other *(specify)* _____ 7

25. Does your school plan to increase the number of laptop computers available for students to borrow during the 2003–2004 school year?

Yes ..... 1 *(Skip to question 27.)* No ..... 2 *(Skip to question 27.)*

26. Does your school plan to make laptops available for students to borrow during the 2003–2004 school year?

Yes ..... 1 No 2

27. What percent of the students in your school are eligible for the federally funded free or reduced-price lunch program?
_____ %

28. Does your school provide any **hand-held** computers to students or teachers for **instructional** purposes? *(Examples of hand-held computers are personal digital assistants such as Palm Pilots or Pocket PCs. Include all hand-held computers provided for instructional purposes, including those available for loan. Do **not** include laptop computers.)*

Yes ..... 1 *(Continue with question 29.)* No ..... 2 *(Skip question 29.)*

29. How many **hand-held** computers are provided to teachers and students for **instructional** purposes? *(Include all hand-held computers provided for instructional purposes, including those available for loan.)* _____

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